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New or Noteworthy Shells

NORTH QUEENSLAND ETHNOGRAPHY.

BULLETIN No. 14.

TRANSPORT AND TRADE. ¹

By WALTER E. ROTH, Magistrate of the Pomeroon District, British Guiana; late Chief Protector of Aborigines, Queensland; Corresponding Member of the Anthropological Institute, London; Hon. Member of the Anthropological Societies of Berlin and Florence.

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¹ Dr. Roth, when transmitting his MS., requested that the details of a few specimens in his collection left undescribed, might be added; these are now incorporated and distinguished by being placed within brackets.
— (Eds.)

I.—TRANSPORT.

1. As a matter of choice, the native will rather wade across a stream than go to the exertion of swimming it, and will often make a comparatively long detour to find a suitable ford. On occasion, the overhanging timber being suitable, he will climb over on the interlacing branches. Sometimes he may effect his purpose by utilising a log that happens to have fallen in the proper direction or to have been purposely placed there, such a natural bridge has a special name given it, and in the case of the Endeavour River Natives is known as *walumba*, the same term as is applied to the forked limb put against a tree in order to climb it, or to act as a sort of platform on which to rest, while cutting out a bees' nest, etc.

Though perhaps occupying country adjacent to the banks of a river, it certainly does not follow that its presence indicates any capability of the local blacks being able to swim. Both on the Burke and Georgina Rivers I noticed this peculiarity, which in the latter case was perhaps explicable by the fact that the lands on the further side were claimed by another tribe, and that consequently the necessity for crossing not having arisen, the art had either not been practiced or had fallen into disuse.

2. Where natives do know how to swim, the posture assumed varies in different localities, and will be described when dealing with the whole question of postures generally. If saddled with impedimenta these are carried, according to size, either in the teeth, on the head, or in a bark or dug-out wooden vessel propelled in front of them. When on the head, the weight is often balanced (as is usually the case when the transport is on land) by a head pad (*KYI. OKn, mordi*), made in the form of a thick circular ring, out of *ten-tree* bark, or grass; when a vessel is utilised, it is either one of the ordinary domestic water trough, "*koolamons*," etc., or else specially made for the occasion out of a length of bark tied up at both ends.

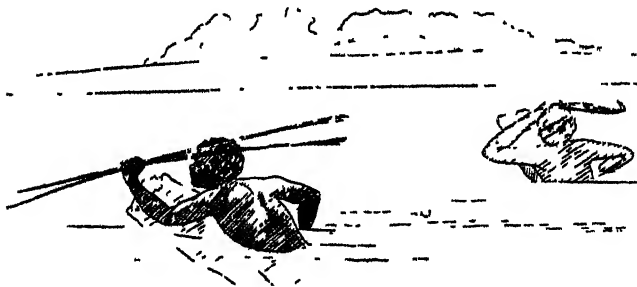
3. When about to cross any large stream, the native, if by himself, will guard against possible accident from crocodile or shark, by practising certain auguries, some of which have already been detailed². When in company, such practices are usually discarded, all his companions swimming across in more or less close formation with a good deal of splashing and shouting. Where however necessity demands that a known crocodile-infested river has to be crossed, and there is no canoe, the black manages it by diving, a method which I had an opportunity of

² Roth—Bull. 5—Sect. 104.

witnessing on the Lower Normanby River (Princess Charlotte Bay). Gliding silently below the surface of the water, he keeps close to the bottom; if it is too wide, he loses no time in coming up for a breath of fresh air and down again: should he come across one of these saurians, he immediately stirs up around him the dark mud on the river bed, and makes good his escape very much on the same lines as a cuttle-fish when in danger. Similar precautions are taken in this same district when a black is diving for lily-seeds in any suspected pool, etc., there always being some friend of his or hers watching, either from the banks or an overhanging tree; the latter, on seeing the shadow or long streaky film of fine bubbles indicating the approach of the reptile, immediately splashes the water surface violently with some heavy stick, etc., and so gives the signal to the individual below, who quickly makes up the bank by crawling and kicking up the mud as already described. The Princess Charlotte Bay Natives never consider it safe to swim even silently on the surface of these waters, however clear they may be, when crocodiles are about. In the neighbourhood of the Proserpine River, the blacks will sometimes drag a heavy hooked club attached to a long rope across the stream to make sure that there is nothing lurking below to endanger their crossing.

A river in flood is met by diving across close to the bottom, where the natives say the current is never so strong. In taking the water for diving from a height, I have only observed the position of feet first.

4. At the mouth of the Mitchell River, and some of the rivers to the south of it, as well as, I am told, on a few of the creeks to



the northward, the cut trunk of some very light tree (? White Mangrove) is utilised as a float. Such a log is cut to about

between five and six feet long, and when in the water can easily support the native who stretches himself upon it to paddle, with the thicker butt-end in front, somewhat in the position of a child riding a hobby-horse, and so paddle himself along, being able to keep his balance with the one hand, he can thus have the other free to carry his spears, etc. (Pl. i., fig. 1, and fig. 1a.) To see these logs for the first time, lying as they were here and there on the sides of the river-banks, and to suggest the purpose for which they were intended, would certainly have constituted a puzzle which, without ocular demonstration, I should never have guessed. Upon enquiry, as to how they had come to practise such a manner of transport the blacks told me that having the body so much out of the water, they could swim these estuaries with much greater ease. On the other hand, I cannot refrain from hazarding the opinion that the employment of the float in this manner may at the same time serve the purpose of protective mimicry from the attack of crocodiles, which literally swarm in these waters, the thinner end of the float, which projects behind after the nature of a tail, giving the swimmer all the appearance, at no considerable distance, of one of these saurians; that the natives here have but little dread of these creatures may be gauged from the fact that on the occasion of a visit of the Government ketch 'Melbider' to the Mitchell River, eleven crocodiles were to be seen at one and the same time from the vessel's deck.

On the eastern coast-line, floating logs were in use at the Keppel Islands up to the time of my last visit in 1897—the few remaining survivors have since been removed—and were employed on those occasions when necessity forced the blacks to swim across to the different islands, and even on occasion to the mainland, the nearest distance from Big Keppel being at least six miles. Having floated a pandanus log, up to as much as thirteen or fourteen feet in length, according to the number in the party, the leader of the gang guides its lesser extremity with the one hand (say the left), and swims along with the other; the man behind, resting his right hand on number one's loins propels himself with his left; number three holds onto number two with his left, and swims with his right, and so on. The most skilful part of the manœuvre would appear to be in the proper use of the leg so as to prevent its impeding the progress of those behind. When the leader gets tired, his place is taken by another, and if all require a few minutes' rest, they have the float to hold on to.

5. Log-Rafts are met with among the scrub-blacks from the Tully to the Russell and Mulgrave Rivers, the coastal ones

employing bark-canoes. On the Lower Tully, amongst the Malanpara Tribe, the raft or warra-jan (Pl. i., fig. 2) is manufactured of two kinds of timber, the ponol and the pedu (*Grewia pleiosigma*, F.v.M.) Four, sometimes five logs of one or other material, are cut off blunt at each end, no attempt being made at pointing them so as to better resist the friction of the water, and tied, while afloat, with a length of lawyer-cane at the two ends only. The tying consists of two parts (fig. 2); first round the outside logs

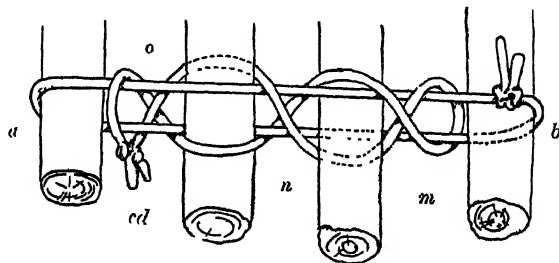


Fig. 2.

(ab), and fixing the cano at any spot suitable (x); and secondly, fixing together the upper and under portions of the cane itself, as well as the intermediate logs, by what may be called a frapping turn. This is effected with another cane, represented loose (cd) in the figure, which after being tightoued up at the first interspace (m), has its extremities brought over through the next interval (n), tightening up again, and passing through the last intervening space (o), where it is finally fixed. These log-rafts are used rather in times of flood than at others, and are generally discarded after use. Sometimes there are a few small pieces of timber placed crosswise at one extremity, and on them a piece of tea-tree bark, sand, etc., may be laid; a fire can thus be kept burning. So far as the shape of the raft is concerned, sometimes the outer, sometimes the inner logs project; there is certainly no attempt at uniformity or any approach to making a bow or stem. No blade or paddle is used for its propulsion, only a pole which can both steer and punt it. It can be worked by one or two occupants; in the latter case with a pole on either side, but apparently no regular time is kept in their movements.

6. A somewhat different manner of Raft is to be seen on the Wellesley Islands. It is V-shaped (Pls. ii. and iii), composed of numerous light saplings ("White Mangrove") with butts all at one end, the larger logs underneath and at the sides, all tied together fore and aft, a cross-tie connecting the two loops to

prevent them from slipping; over the wider portion of the raft is placed a bundle of dried grass, upon which the traveller squats and paddles himself along.

7. Bark-Canoes are made either of one, two or three sheets of bark, and in the main are river-craft, though on the East Coast they are often taken across to the neighbouring islands, and on the West Coast out on the sea, but only when the wind and weather are favourable.

Those built of a single sheet are found on the Gulf Coast, extending from the Batavia and Ducie Rivers down to the Archer River, and on the eastern littoral along an area reaching from the Johnstone River to a little below Cardwell. That their area of distribution on the latter coast was much further south than this within very recent times is rendered highly probable from the fact that the Keppel Islanders, who possessed no canoes when I first came amongst them, made me models of the single-sheet type to explain the craft they used to have in days gone by. These models were all the more interesting in that the only traces of bark canoes that were discoverable amongst the neighbouring mainland natives of the Fitzroy River were of the three-sheet type.

The manufacture of such single-sheet canoes is practically the same on both coast-lines, the existing differences being only in detail. At the Tully River (East Coast) the bark employed is obtained from at least five different timbers, known under their local Mallanpara names as nupa, kirau, kiri, yabandai, and kalkara, of which only the first has been identified as *Calophyllum tomentosum*, Wight. The method of stripping has already been explained³. I was further informed that the bark



from these particular trees will strip more or less at any time of the year, i.e., not necessarily only at the end of the wet season when the sap is up. The sheet of bark, according to length required, having been removed, one of its ends is heated over a fire to render it pliable, and the whole length then folded long ways, with the outside of the bark outwards; the end which has been heated is next clamped in a vice. This vice is made of two switches (fig. 3) tied tightly below around a stiff bundle of grass, bark, etc., so as to form a kind of fork, the 'leg' of which is implanted firmly into the ground; the 'arms' are subsequently tied over the end of the folded length, which is thus held tightly in position (fig. 4). The name given to this piece of apparatus is yuku nambil-nambil (yuku=tree, log, timber; nambil=to squeeze). A spreader or

³ Roth—Bull. 7—Sect. 1.

stretcher, any strong piece of timber, is next jambed into position so as to outline the future shape of the canoe, and also to serve as a guide for cutting off from the end projecting beyond the vice that portion which will subsequently constitute the bow. The cutting, which is effected with a strong sharp-edged shell (usually *Cyrena jukesii*, Desh.) is done from below upwards, through both portions of the fold simultaneously. It is not a straight incision, but curved more at the bottom than at the top, the operator standing face to face with

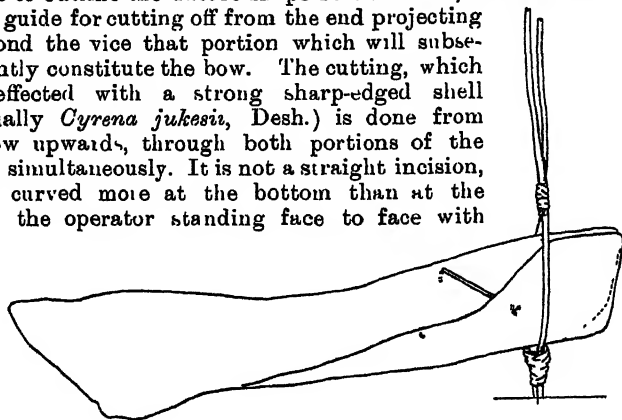


Fig. 4.

the extremity of the bark and cutting towards himself. After being cut into shape this bow end is finely sewn, or rather over-cast to use the correct term, with a split strip of lawyer-cane (*Calamus*), through holes which are drilled with an artificially-pointed wallaby bone. At the same time some tea-tree bark (which swells when moistened) is included in the over-casting of the extreme lower limit of the cut, where water is very likely to enter owing to the tendency to stretch and split consequent upon the extreme degree of flexion to which the bark-length is subjected. The sewing completed, the clamp is opened, and the other end of the bark-length similarly treated to form the stern, but in this case a wider spreader is used, the stern of these canoes being always made somewhat wider than the bows. Usually, by the time this stern of the future canoe is ready to be clamped, it has been already sufficiently exposed to the sun to make it pliable enough for working, otherwise, it is heated over the fire. With both spreaders still in position two strong withies, tapered at both ends to give greater flexibility, are attached to the inner top of either side of the vessel by over-casting with similar materials as before, and sewn in with them are unsplit lengths of *Calamus* or *Flagellaria indica*, Linn., the whole constituting the gunwale. It may be noted that though the withies start from the extreme limit of the stern, they do not as a rule reach quite up to the bow (fig. 5), on the other hand the unsplit *Calamus*, etc., surrounds both stern and bows completely. To strengthen

the canoe, some five or six pieces of bark, after being bent well into position, are made to lie inside and crosswise; these are pressed against the inner surface of the vessel by means of as many ribs, formed of split cane, which are prevented springing out of position by being forcibly tucked under the gunwale. A single tie is now sewn across the top at about the centre of the vessel, so as to prevent the two sides springing apart (from the action of the ribs) after the removal of the spreaders, which finally takes place. Last of all, a hole is made



Fig. 5.

at the top a little to one side of the bow, and through it is fixed the rope to which the anchor in the shape of a heavy stone or piece of rock is attached. Such a canoe (Pl. iv., fig. 2) has fairly abrupt ends, is usually small, being intended for one person only, and in the example which I saw manufactured took a little over a day to make, this including the removal of the bark from the tree. I am informed that it will last a long while provided it is kept away from the sun under a good shade; should it crack, the tear is sewn up with intervening tea-tree bark and covered with bee's-wax usually, with one or other of their gum-cements on occasion; when in use, the occupant assumes a kneeling position (Pl. iv., fig. 1) with buttocks resting on the heels, his weight as low down as possible, and paddles himself along by means of a small oval-shaped piece of bark or a large pearl-shell held in each hand, the movements of one following those of the other. This bark-paddle is called *parambi*, the same name as is applied to the crest of a Cassowary. He carries a shell-bailer and often a fire, or else the materials and sand for making it on.

8. The single-sheet bark-canoe of the Gulf Coast, *e.g.* of the Batavia and Pennefather River Natives, is built on identical lines, a similar clamp being brought into requisition. The main differences lie in the absence of any special gunwale, and ribs, and the peculiar arrangement of spreaders and ties. To keep the sides in position two spreaders or stretchers (fig. 6), bluntly-pointed pieces of stick, are put in, their effect being counteracted by two, sometimes three, ties, made of twisted vine, which are fixed into

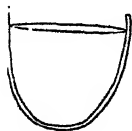


Fig. 6.

opposite sides of the vessel and stretched by means of two forked sticks placed cross-wise, their bases resting on extra pieces of bark (fig. 7). Minor differences are to be found in their general size, which varies according as they are constructed to carry from one to five or six people, in their more sloping extremities,

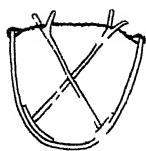


Fig. 7.

which ride the water higher than those on the East Coast, and in the fore and aft-portion being hardly distinguishable. the keel sloping away to the stem only a little more gradually at the narrower bows than at the wider stern. Furthermore, during the process of sewing up the cut ends, the over-casting commences at about the centre of the cut, the lower and upper portions being next respectively completed. The bark employed is obtained from *Eucalyptus tetradonta*, F.v.M. (NGG. arai-i). These canoes are worked with a single paddle (Pl. v., fig. 1, and fig. 8) held in both hands, and used on one or other side as may be required; the paddle (NGG. ngamba) is of interest in that it is an example of a 'natural form,' being constituted of the spatulate root of *Bruguiera rheedii*, Blume (NGG. tcherda), or *Ceriops candolleana*, Arn (NGG. larchanama). The natives are very expert in balancing themselves on these frail structures and can even manage to stand up and throw a spear. The Rev. N. Hey, Superintendent of the Mapoon Aboriginal Mission on the Batavia River, has seen one of these canoes tipped over in the open sea, emptied of the water, and clambered into again by its occupants. When not in use, the vessel may be kept high and dry in the shade, or else left in the water. For transport on land it may be carried on the heads of one or more persons walking Indian-file.



Fig. 8.

8a. The names of the different parts of these single-sheet bark canoes on the Tully and Batavia Rivers, as applied by the local Mallanpara and Ngerikudi Tribes, respectively, are as follows:—

	Tully R.	Batavia R.	English equivalent.
Canoe as a whole	ku-kai	truno	= bark
bows	ngorn	pai	= fore-head
stern	mono	mo	= buttocks
keel (unsewn portion) ..	chu-cha	mbo-ini	= back, dorsum
„ (sewn portion) ...	.....	andro-ana	.....
inside	{ kanga	.....	= inside of anything
		churo	= median depression of chest and abdomen.
gunwale .....	.....	mbau-o	= adjacent breast & abdominal walls on either side of this depression.
spreader, stretcher .....	.....	lo	= any piece of wood.
tie .....	.....	doan-donno	.....
forked support for the tie .....	.....	la-ta	= trunk of a tree.

9. Canoes made of two sheets of bark were seen on the Tully River and are said to require a much longer time for their manufacture. The keel is sewn first, the extremities only after alternately repeated wetting and drying. Their *raison-d'être* is apparently the want of a suitably sized sheet to allow of folding; they have no special name to distinguish them from the *ku-kai* already described.

10. The three-sheet type of bark-canoe is to be seen at the present day in use amongst the natives on Whitsunday and adjacent islands (Pl. v., fig. 2), though within the present generation its limits extended certainly as far south as the mouth of the Fitzroy River, where the local Tarumbal Blacks made me some models in 1894, by which time canoes of any description had ceased to be in vogue. Cut into more or less of a diamond

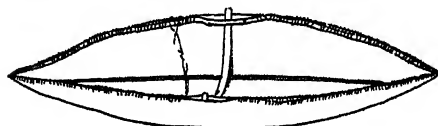


Fig. 9.

shape, one sheet forms the bottom of the vessel, the other two the sides (fig. 9). On the Fitzroy River the timber used was iron-bark, though the bottom piece was some times replaced by blue gum, and the completed vessel, from six to seven feet long, was known by the name of *winta*, *koka* or *okka*, and *wallo*. Mr. W. T. Wyndham⁴, gives a short description of such a canoe in the old days from Central Queensland, and told me that it was the same as what he saw subsequently on the coast-line:—"There is one kind of bark-canoe they make in Central Queensland that I have assisted in making, and do not recollect having seen in New South Wales. The builder cuts three sheets of bark into an oval form, he inserts one sheet in a hollow in the ground, with the ends resting one on each side of the hole, he then puts a log or some other weight in the centre of the bark so as to cause the two ends to turn up, fire often being used to get them into the proper shape, the ends are then pared rather thin; the peel of some fibrous root (generally from a species of *figus*) is used as a thread to sew the bark together; the two pieces of bark are placed on their sides, and the bottom sewn on to them by using an awl, a roll of the paper tea tree plant is used to caulk the cracks, two saplings are sewn inside to stiffen the outer rim of the canoe all round, and the *okka* is finished." The Whitsunday Island specimens usually have stretchers to keep the two sides apart. On occasion I have

⁴ Wyndham—Journ. Roy. Soc. N.S. Wales, xxiii., i, 1889, p. 40.

seen a more or less central tie, or a tie fore and aft, in addition : fixed right forward in the bows is an upright fork upon which the harpoon rests. A single paddle with a lanceolate blade is used, and is certainly very different from the model made for me by the Fitzroy River Natives, which was somewhat after the nature of a gradually-tapering comparatively short stick, the thicker extremity being whittled down on the one side only, into a shallow more or less concave blade. The material used for the Fitzroy paddle was said to have been originally made from "brigalow," but more usually from the less heavy "bottle tree."

11. Dug-Outs, in the condition met with along the Queensland Coast-line, are, like many other objects of Ethnological interest observable in Cape York Peninsula, of Papuan origin, and shew modifications in proportion with the distance from the area of main contact. At the same time it must be remembered that, certainly within the last eighty years, the Torres Strait Islanders (all of them Papuans) would travel south a long way down the Barrier Reef during the north west season, and return with the south east. In its original form, the dug-out canoe consists of a body with two outriggers, of which the suppression of one constitutes the primary modification, their method of construction (attachment of boom to float, etc.), forming the secondary. The body—the 'dug-out' as its name implies—is made from a suitable tree-trunk fashioned more or less at each end into a recognisable bow and stern respectively, and hollowed out with native-gouges, etc., and firing, as already described. The timber used varies with what is available in the different areas:—Thus, on the Endeavour River I found it to be *Bombax malabaricum*, D.C. (KYI. nangarburra), *Eccocaria agallocha*, Linn. (KYI. molaba), *Alstonia verticillata*, F. v. M. (KYI. morrangal), and *Sonneratia acida*, Linn. (KYI. pornupun); at Cape Bedford, *Canarium australasicum*, F.v.M. (KYI. gundar), and *Gmelina macrophylla*, Benth. (KYI. detchi); at the Batavia River *Bombax*, etc. It is distinctly a sea-going craft as compared with the bark-canoe. The original form of double-outrigger dug-out is found on both shores of the Cape York Peninsula; at the Batavia River only, on the Gulf side, and in the neighbourhood of Cape Grenville on the east coast. It is noteworthy that now and again during the north west season foreign dug-outs are washed ashore, at the mouth of the Batavia.

12. On the Batavia River, the outer side of the body of the dug-out is but little worked, except of course at the ends, where there is a projecting ledge beyond the excavated part (fig. 10); that at the bows forms a sort of platform, that at the stern a kind of lip,

with the result that the line of keel makes a somewhat graceful angle with the former, but an almost abrupt ending with the latter. It is on the projecting platform that the hunter stands

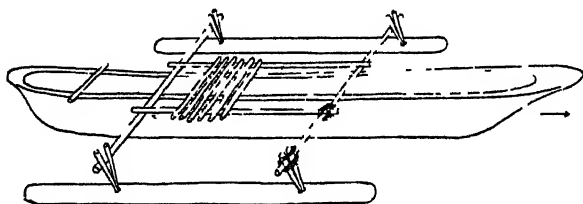


Fig. 10.

when on the look-out for turtle, etc. It was ascertained that the butt end of the tree-trunk ultimately forms the bows, which accordingly ride wider and higher when floated. The greatest breadth in the bilge is not very markedly larger than the space between the gunwale; the sides tumble in but slightly. Two booms are fixed cross-wise over the body (fig. 10), at about between the middle and outer thirds (the anterior third being the greater), by means of a rope passed through a hole drilled in the gunwale, and their ends are fastened by pegs to the float lying at each side; each set of two pegs, lying on a forward slope, is wedged below into a single mortice in the float, while above, its separated components are tied to the front of the boom. When a central staging is required, this is built up of two sticks tied parallel with the sides of the vessels, on to both booms, and smaller pieces in close apposition laid upon them transversely. The occupants, other than the one standing on the projection at the bows, sit either on the booms, on pieces of wood laid across the gunwale, or the stern ledge; there is of course room for them to sit only one behind the other, and if there is but one man steering he will have his place at the stern. The timber used for the float is not usually the same as that employed for the body, but of a more buoyant variety.

13. From Night Island down to Claremont Point, the after boom is close to the stern (fig. 11), both booms being made to pierce the gunwale over which they are lashed to pegs driven through the sides below. Furthermore, the extremities of the booms are lashed on to the float direct, without any intervening pegs, an arrangement whereby the whole centre of gravity of the vessel is raised, the consequence being that the occupants have to squat in the bottom of the canoe (Pl. vi., fig. 1). There may be a small peg forward, to attach the line to. The paddle, worked in all

dug-outs with both hands, on either side of the canoe alternatively, is fairly similar in all these northern types, with a long comparatively-narrow blade.

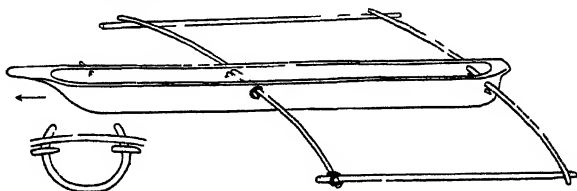


Fig. 11.

14. From the Flinders Group down to Cape Grafton there is a suppression of the left (port-side) outrigger, and following upon this—to ensure rigidity of the surviving float, an increase in the number of booms; to restore the centre of gravity of the body to the vertical is the intervention of comparatively large pegs between the boom-extremities and the float. At the same time, travelling from north to south, the stern projection gradually becomes more and more developed, until it closely approximates that of the bows, both extremities simultaneously changing from oval to square. The booms are all double, *i.e.*, in sets of two, and form a staging on to which the spears and harpoons may be laid or tied. On the authority of reliable natives I learn that Cape Grafton constitutes the southern limit of the dug-out, and that any such vessels found below this are not of local coastal manufacture.

15. Between the Flinders and the Endeavour Rivers two wash-boards are lashed on to the outer sides of the gunwale, with or without an intervening coil of tea-tree bark, and through their upper free margins the double booms are pegged (figs. 12 and 13). Though I have spoken of these narrow planks as wash-boards—and

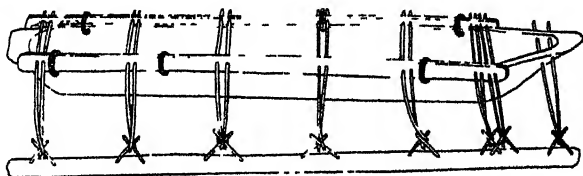


Fig. 12.

they probably serve that purpose—I fail to understand their signification unless they give indication of the lateral supports of

the Papuan central staging: they have already disappeared at the Bloomfield River, where the booms pierce the gunwale direct (Pl. vi., fig. 2). The number of double booms will depend upon

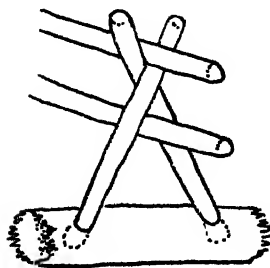


Fig. 18.

the size of the vessel, not less than four nor more than eight having been observed, a double one occasionally being made to pierce the extreme bows direct; their two components are lashed—one above, the other below—to the angle formed by the tops of the crossed pegs morticed into the float. Two double-booms are sometimes placed in very close apposition. At Cape Bedford, where the best specimens of canoe are to be seen, and whence the cast-offs and inferior ones are traded to Cooktown, the pegs are made from a special timber (KYI. dadetchin), while the floats are cut from a peculiarly light wood which is cast up on the beach, and preserved until required. The bow-end of the dug-out being made from the (wider) butt-end of the tree, it happens that the distance of attachment of the float from the side of the body is somewhat nearer in front than behind: in other words, the total width of the vessel as a whole is practically the same fore and aft, an arrangement which would appear to be advantageous. Here at Cape Bedford, the dug-out is generally dragged down to the water's edge by three individuals, then put in the shallow water, and punted along with two poles—one at the bows, the other at the stern—until such time as the water is deep enough for the paddles to be made use of. At Flinders Island in 1902, I saw a dug-out canoe with stretchers placed within it cross-wise apparently with the object of preventing the sides approximating too much, an arrangement which recalled the crossed forked sticks supporting the ties in the Pennofather River bark canoes. The Bloomfield River dug-outs only differ from the Cape Bedford and Flinders type in the absence of wash-boards.

16. From the Mossman River down to Cape Grafton the dug-out is cut very square at either extremity (Pl. vii.), it often being very difficult, in the absence of the outrigger, to distinguish bow from stern, the former if anything being the larger; neither is raised above the level of the body. The space between the gunwale is extremely narrow, the sides being cut to overlap; the occupants sitting on the double-booms are obliged to have their legs crossed one over the other, and yet I have known five or six people at

one time travelling all the way from Port Douglas to beyond Cairns in this apparently uncomfortable and cramped position. This variety of dug-out can be made from at least five kinds of timber, and will range up to fifteen or sixteen feet in length. I am doubtful as to the original local type of paddle⁵.

17. I attach the native names of the different parts of these dug-outs at the Batavia River (Nggerikudi language) and Cape Bedford (Koko-yimidir language), together with the meaning of the words where known.

Part.	Batavia R.	Cape Bedford.	Meaning.
Dug-out (as a whole)	partara	wangga	.....
Body	churongganna	banchirn	.....
„ platform at bows	or-kana	.....	.....
„ bows	pai	wagga	= fore-head.
„ stern	mo	.....	= buttocks.
„ keel .....	.....	guramun	.....
„ inside ..	mbu-ini	mo-ku	= backbone.
„ „ ..	.....	wau-wu	= the dorsum.
„ „ ..	churo	.....	= inside of anything.
„ „ ..	.....	.....	= middle line of stern-
„ „ ..	mbau-o	.....	um and abdomen.
„ outside .....	.....	.....	= adjacent portion of
„ „ ..	.....	yirmbar	= rib.
„ wash-board .....	.....	yirmbar	= ? (of yirmbi=lips)
„ Boom .....	.....	dabbul	= ? (of tabul=nose-pin)
„ „ ..	ar	.....	= hand
„ Float*	ar-temma	.....	= little finger
„ „ ..	.....	darman	.....
„ „ ..	.....	kanna-kanna	= ? (of ga-na= digging-
„ Pegs	landru i	.....	stick)
„ „ ..	pro-alatanna	gumbin	= any splinter.
„ Rope for tying .....	.....	biribe	= any rope or string.
„ Paddle .....	.....	.....	.....

18. I have purposely refrained from making any notice of the Torres Strait Island sailing craft (dug-outs), which although visiting the neighbourhood of Cape York, are of Papuan interest,

⁵The Kungganji Blacks of Cape Grafton speak of the float as bunul, the local term for mullet, indicative of its habit of skimming along the surface of the water.

and do not come within the scope of a work dealing with Australian Ethnography. At the same time mention may be made here of the toy sailing boats made by the boys at Mapoon (Batavia River), with a single outrigger, always on the weather-side, which can be shifted from port to star-board and *vice-versa* as occasion requires; how far this innovation is due to civilising influences under missionary auspices, it is impossible to say.

At Cape Bedford the blacks have native names for European made vessels. A steamer is known as gol-ngoi, but the actual etymology of the word is not known; a boat is called yulal, a term signifying any flat piece of wood, and so applied to the planks with which it is built.

19. In the Brisbane District⁶ a canoe was called kundul, the same term that was applied to every kind of tree-bark except that of the tea-tree, which was known as rguduru. The tree which was particularly used for making canoes was the bulurtehu or "bastard mahogany," the bark of which did not split, but when this was not obtainable recourse was had to the diura, one of the "stringy-barks," though this was liable to crack during the progress of manufacture. The canoe was always made out of one sheet of bark, from ten or twelve to as much sometimes as twenty feet long, which was removed from the tree, during spring-time, as follows:—The native would climb up to the necessary height and make a deep transverse cut the whole circumference of the tree, with a vertical one where convenient; while still up, he would pick off all the rough outer scales with a small spatulate pointed stick (which had its special name), and as he descended lower and lower would both lengthen the vertical cut, and peel off the bark, finally cutting it off below after having been thus cleaned. When removed, this sheet of bark was tied round at each end to keep it funnel-like, fires lighted inside, and the whole piece kept revolving, not only to prevent it catching alight but also to get it uniformly heated. This process rendered the bark more pliable, with the result that when subsequently the men standing at either extremity bent each up, it could easily be crinkled, folded, and skewered, in a manner almost identical with the pleat-type of bark trough,⁷ save that the adjacent surfaces of each fold were not pressed into such close apposition. The gunwale was strengthened by fixing along its inner edge a long withe of wattle (*Acacia*, sp.) or nannam (*Malaisia tortuosa*,

⁶ From information given me by Mr. T. Petrie.

⁷ Roth—Bull. 7—Sect. 58.

Blanco), and overcasting with a split length of yurol (*Flagellaria indica*, Linn.), which was also similarly employed for overcasting the two wooden skewers. The bark vessel, as now constituted, was inclined to curl in at the sides with the heat of the sun; this was counteracted by means of a stick placed cross-wise, which was prevented slipping by tying its nicked ends to the under surface of the gunwale. If a small canoe, the cross-piece was fixed at the centre, but if large, one would be placed fore and another aft; both ends of the canoe were similar and indistinguishable. The vessel was propelled by the individual (male) standing up in the centre and using a long pole, up to ten feet long and a couple of inches diameter; it was a sort of punting movement (not touching bottom of course), the pole being used on one side of the vessel alternately with the other according to the course to be steered. Some of these big canoes would carry as many as ten people, but with the larger vessels, one man would usually punt at the bows, and another at the stern; the passengers always sat low down on their haunches at the bottom of the boat. In the smaller canoes, there might be two or three gins by themselves, especially when they went for short distances, to the little islands for crabs, oysters, and cobbra. In all these vessels there was always a fire kept glowing on some clay at one end, and, in case of leakage, a shell-bailer^a or ningham (*Melo diadema*, Lamk.), and some whitish clay^b which, if necessary, would be plugged into the split. Canoes were identical whether intended for fresh or salt water.

II.—TRADE AND BARTER.

1. On the Bloomfield River (*R. Hislop*), the articles of home-production for trade and barter were dilly-bags, spears, wommeras, edible pipe-clay (within recent years), best kind of fighting-stick, shields and swords (in the old days), several varieties of gum-cements, and red ochre. These would be bartered for stingaree-spears, shell-ornaments, yellow ochre, edible pipe-clay (in the old days), shields and swords (in recent times). There were no particular individuals to effect the exchange, each one acting on his own behalf, nor were there any restrictions as to which of his neighbours they might barter with. The principal time of barter was during the laying-season at King's Lake country, *i.e.*, whenever there happened to be a sufficient supply of

^a Roth—Bull. 7—Sect. 55.

^b Roth—Bull. 7—Sect. 15.

food to attract them¹⁰. There was apparently no conception of relative values, and though not a regular practice, members of the same tribe would interchange.

2. At Princess Charlotte Bay, the Koko-rarmul of the Morehead River give the Koko-warra (whose 'country' extends along the course of the Normanby and Deighton Rivers) reed-speers, iron-scrapers, European tomahawks, etc., getting in return melo shell, grass-reed-spears, nautilus-shell necklaces, stingaree spears and fishing-nets. The Endeavour and Bloomfield River Blacks travel up in the direction of the Laura River, and supply the Koko-warra with red-ochre, white-clay, grass-tree spears, etc., which are paid for with the same articles as are supplied to the Koko-rarmul.

3. The Cape Bedford Blacks send out or export iron tomahawks, iron digging-sticks, nautilus-shell, different kinds of dilly-bag, pearl-shell chest ornaments and melo-shells. In return, they obtain forehead-bands, kangaroo-tail sinew, kangaroo bones (of a certain kind to be specially used for making bone awls), quartz-tipped spears, bark troughs, and a rough kind of fixed grind-stone. They travel in barter along the Northern Coast-line as far as, very probably, the Flinders River. They only come south to the North Shore (Endeavour River) encampment, opposite Cooktown, owing to their employment in the township, but this is only of late years. Captain Cook¹¹, it is noteworthy, when speaking of the Endeavour River Natives, is made to say:—"They had indeed no idea of traffic, nor could we communicate with any of them—they received the things that we gave them, but never appeared to understand our signs when we required a return."

4. For purposes of trade and barter it may be said that the Cairns, and until recent years, the Cape Grafton Blacks travel along the coast-line between Port Douglas and the Mulgrave River; the Barron River Natives wander up the coast as far as Port Douglas and inland up to Kuranda and Maroeba; the Russell River boys 'walk about' to the Pyramid Mountain, the Mulgrave and Johnstone Rivers, and Cairns; whilst the Johnstone River Natives travel to between Clump Point and Liverpool Creek. Dealing now solely with the Cape Grafton Blacks, it

¹⁰ In the Boulia District, it would appear that the trading season commenced with the full maturity of the Pituri plant, the local narcotic (see Roth—Ethnol. Studies, etc., 1897, Sects. 224, 229-234), while at Brisbane (*T. Petrie*) it was when the Bunya nuts were ripe.

¹¹ Hawkesworth's Edition, London, 1773.

would appear that, prior to the institution of the Yarrabah Missionary settlement, the following list comprised the trade-articles of home production :—biconical dilly-baskets (taken or sent to Port Douglas, the Mulgrave and Barron Rivers, Marceba and Herberton), grass-bugle necklaces (for the Mulgrave and Russell Rivers), four-pronged fish-spears (Mulgrave and Upper Russell Rivers, Johnstone River, Clump Point, etc.), straight spear-throwers without the shell-haft (for the Mulgrave, Johnstone and Russell Rivers), bent or moon-shaped spear-throwers, large fighting shields and long single-handed swords (all for the Barron River and northwards). The imports constituting the Cape Grafton northern trade, coming mainly from the Barron River and Port Douglas, included the following :—hour-glass woven-pattern dilly-bags, round base basket dilly-bags, beeswax necklaces, straight shell hafted spear throwers, a variety of bamboo spear, square-cut nautilus-shell necklaces, and cockatoo top-knot head-dresses. The southern foreign trade, which used to come in either directly or indirectly from the Mulgrave River, comprised :—long swords, boomerangs, shields, opossum-string armlets, and the large oval-cut pearl-shell chest ornaments, the last mentioned being said to have reached the Mulgrave River via Atherton and Herberton, whither it was believed to have been brought from the Gulf Country. The trading, amongst the Cape Grafton Blacks, was not carried out by any particular members of the community, the bartering being apparently personal, each one doing business on his own account.

5. Amongst the Tully River Natives, there are collective names for goods coming, not going, from one or other direction :—

(a) *Trakanji* (another name for the chan-an basket dilly-bag) implies collectively all the imports from the north and west.

(b) *Kun yin* (another name for the kwi-anchal pearl-shell chest ornament) includes all the goods that come in from the south.

On the other hand, there is not much barter going on nowadays. To the Clump Point Blacks, these Tully River boys (the Mullanpara) give *Heleocharis*, getting the *Cryptocarya banneroti* nut in return : to the Cardwell Natives they barter dilly-bags for which they receive bark-blankets, etc.

6. The Pennefather River Natives apparently do not carry on much in the way of trade ; they travel but a comparatively short distance up and down the coast-line, and never to any great distance inland. Their northern neighbours, the Mapoon, obtain from the northern shores of Port Musgrave the 'ombo' spears, for these they give bamboo and stingaree-spears, which they have obtained from the Pennefather River men.

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1. Owing to the immense number of variations met with in the way of fashion, I have found it impossible to carry out my original intention of describing seriatim all local costumes, but propose, as far as possible, detailing the various ornaments and means of cover, constituting clothing, according to the portion of body decorated or covered. Even by this arrangement, difficulties are to be seen in that:—A necklet may be worn as a waist-belt; an article donned by a male may be forbidden to a member of the opposite sex, and *vice versa*; an ornament worn throughout one district with a special signification attached to it may have no meaning whatsoever in another; certain ornaments according to their materials of construction are found only in certain areas; a decoration donned on different parts of the body will convey different meanings, an article of dress essential in early life may be discarded with adolescence; and often nothing at all may be worn in contradistinction to a complete costume indicative of rank, virginity, grief, fight, etc. It has been found convenient to distinguish certain waist-decorations or covers as skeins, belts, or bands, circlelets, and apron-belts according to the method of fixation in the first three cases, and the presence of a specially woven tassel-fringe in the last. Certain special decorations met with in the North-West District corroborees, and initiation ceremonies¹, which there is every reason to believe are of foreign origin introduced during the course of trade and barter, have been omitted here.

As a matter of convenience, I also propose dealing in this Bulletin with certain deformations, *eg.*, tooth-avulsion, nose-boring, digital amputation, and the so-called decorative body-scars, the true origin of which is somewhat doubtful.

¹ Already described in Roth—Ethnol. Studies, etc., 1897, chapters viii., xiii.

2. In the far North-Western Districts, the hair of the head—and especially is this the case with the males—is dressed with fat (snake, iguana, etc.) after growing a certain length, and put up very much after the style of the throms in a mop-broom. This facilitates not only its removal when required for subsequent use in making hair-twine, but also prevents its becoming too closely matted together. On the Eastern Coast-line, from Princess Charlotte Bay to Cape Grafton, the fashion is adopted only by the immediate relatives during the period of mourning, when the hair is allowed to grow previous to its being cut and manufactured into mourning-strings; with children, however, it is a matter of common routine, the throms fixed up with beeswax being still further decorated on occasion with the red and black Jequirety (*Abrus precatorius*) seeds. Hair may be kept short by singeing with fire, or by cutting with quartz crystal (Bloomfield River), split cuttle shell (Koppell Island), various bivalves (e.g. *Perna*), stone-flakes, etc. At Brisbane, women's hair was always cut short, so as to prevent them catching hold of each other's when fighting—a very common habit and of tearing at the hair. They cut it with a sharp flint or the yugurish-shell, its native name. The men's hair, combed out with a pointed kangaroo bone, was allowed to grow long, and when necessary the throms would be cut off to make hair-twine. Head-lice were considered an advantage; a man would often lie down with his head resting in his wife's lap when she would comb his hair, examine for the vermin, perhaps eat some, make a peculiar smacking noise when squeezing others, or, if it were perfectly clean in this respect, she would infect it from some one else's head. The beard was very seldom allowed to grow long. Each sex would have the entire limbs and body, except the genitalia, rendered free from hair by singeing with a fire stick—parts which they could not reach, their friends would singe for them. The entire surface would then be smeared with charcoal and grease (*T. Petrie*).

3. The pulling out of the moustache or beard, or both, hair by hair, was not uncommon on the Tully River; either another man or his gin will do it for the individual interested, the depilation going on for hours at a stretch. No reason for the practice was forthcoming, though the introduction of razors and glass is superseding it. On the other hand some men would fancy a long beard, and accordingly retain it. Depilation was also practised on the Tully and Proserpine Rivers; on the latter, when hair first shewed on the upper lip or chin, the young men would take hold of a bit of it here and there with a blob of wax,

rub it well in, and so pull it out. The Cape Bedford natives encouraged the growth of the beard. In the Boulia District, the beard is often tied close to its base with a piece of twine to make it look flash, both at corroboree time and on other occasions; in the Gulf country it may occasionally be seen waxed into one or two points (Pl. viii., fig. 1).

4. *Head-net*.—Where the growth of the hair is encouraged as the usual thing, a special head-net (Pl. viii., figs. 2 and 3) is used to prevent the thrums from dangling over into the eyes: it is woven² on a circular basal strand, made of flax-fibre (*Psoralea patens*, A. Cunn.) and coated thickly with red ochre grease. It is manufactured by men only in the Boulia and Leichhardt-Selwyn Districts; its Pitta Pitta name is kulpurn, its Kalkadun one kantamara. Another form of head-net, an undoubtedly modern innovation, is made by the women throughout the same areas after the manner and mesh of a European fishing-net, with a conical blind extremity. Another contrivance which ostensibly served to keep the hair from falling over the eyes and face was the now extinct kalgo of the Cloncurry District. It is a long strip of Opossum skin with the hair left on, and about seven or eight feet long, made out of the back by starting from about the centre, cutting out concentrically round and round, the strip being subsequently stretched and dried. Winding it round and round the head, just above the ears, both men and women wore it, the custom being to remove it at night.

5. *False hair*.—On the Embley River I met with adjustable fringes, used by the women, and made of small thrums of human hair fixed on a topstring, the extremity of each tassel being weighted with a blob of beeswax. The Cloncurry District women and little boys for "flash" purposes wear an artificial whisker, formed of locks of hair cemented together at one extremity with Grevillea cement; such a wolla-kuja is attached on either side to the temporal hair in front of the ear, and hangs to a length of about two inches below the jaw.

6. *Forehead-nets*.—The forehead-net or miri-miri (Pl. viii., figs. 4 and 5)—a name common throughout North-West Queensland—is a spindle-shaped piece of netting quite a foot long, also worn to keep the hair well back, passing over the ears and tied together at the back of the head. It is woven after the ordinary fish-net pattern,³ though no netting needle is used; in some examples, each

² Roth—Bull. 1—Sect. 25.

³ Roth—Bull. I—Sect. 23.

individual mesh may be only one-eighth of an inch long. The material used in its manufacture is either human hair, flax-fibre, or Opossum twine, whichever is used causing variations in the mesh-size. The miri-miri is one of the badges of the last of the initiation ceremonies in the Boulia District, and can be worn by both men and women, subsequently to that stage, at all times, whether corroboree or not. Made by males only.

7. *Forehead Feather-covers*.—The emu-feather forehead dress of the Pennefather River is of two varieties according to the species of bird, black (NGG. arába) or white (NGG. engge njingana) from which it is manufactured. The feathers are interwoven at their bases by means of two continuous strands in the form of a chain-twist, and as a necessary corollary to the article being constructed on the flat, the chain-twist runs zig zag, alternately from side to side, just like the strainers and colanders from the Lower Mitchell River.⁴ It is more or less mitreform, coloured at its base in horizontal bands of red and white, tied by its two extremities to the back of the head, and known to the Pennefather River Natives as tai-pe; though manufactured by women, it is used by men and boys when dancing and when fighting.

8. *Feather-tufts; Aigrettes*.—Feather-tufts or aigrettes are formed of various bird's feathers tied to a small spig, which is stuck indiscriminately here and there into the hair; on the other hand, feathers may be used by themselves singly. Amongst birds thus utilised are the emu, white cockatoo, eagle-hawk, pelican, turkey, etc., but on the Upper Georgina River I have seen feather-tufts replaced by the tails of the *Paragale layotis*, Reid.

The white cockatoo feather-tuft is met with almost throughout Northern Queensland, but is very common indeed in the eastern half of the State, and is used by males only, either at corroborees, for decorative purposes generally, on fighting expeditions often. At Hendingley (Upper Georgina River) it is stuck into the forehead band (or armband); between the Mitchell and Staaten Rivers, the Gunami fix it upright on the top of the head and call it workai a (fig. 14). The Middle Palmer River Blacks obtain the ornament (KMI. kwa-chil) by trade and barter from the Musgrave and Saltwater River Natives of the eastern coast.



Fig. 14. On the Endeavour, Bloomfield, and certainly as far south as the Tully River, these cockatoo feather tufts may be made wholly from the bird's "top-knot," stuck into a large blob of wax

⁴ Roth—Bull 7—Sect. 52.

fixed on the back of the individual's head, giving rise to a gorgeous-looking yellow halo; at other times, especially between Cardwell and the Tully River, the head is first of all covered with blobs of beeswax, or else completely encased in this material, and the feathers then attached. Additional local names are: MAL. *tchura*, KYI. (Cape Bedford) *mirimbal*, KWA. *arrirgurr*.⁵

Emu-feathers are fixed with beeswax to the hair in both men and women at Cape Bedford.

On the Pennefather River, in times of mourning, members of both sexes attach a red feather, or two of a species of Blue Mountain-parrot to the forelock; this feather ornament, like the bird from which it is derived, is called a *mantenuta*. Similarly worn by women, under the same circumstances, is the red flower of the *arányi*, the local name of the Coral-tree (*Erythrina vesper-tilis*, Bentham).

9. *Knuckle-bones*.—Knuckle and similar bones from the kangaroo or dingo, and up to about two and a half inches in length, are fixed with cement by string to the tuft of hair over the temporal region, whence they dangle one on each side in front of the ears, in the Boulia and Upper Georgina Districts.

10. *Tooth Hair-ornaments*.—The double tooth-ornament^{5a} is formed of an oval-shaped blob of cement into which a couple of incisor teeth of the kangaroo, rarely of the dingo, are fixed; the cement employed is that of the *Triodia* or *Grevillea*. There is an aperture in the base of the ornament through which a small lock of hair from over the centre of the forehead is passed and thus fixed, with the result that the tips of the two teeth rest midway between the eyebrows. On occasion it is made to hang from a forehead band instead. Though used by both sexes at corroborees and other festive occasions, it is manufactured by men only in the Upper Georgina, Leichhardt-Selwyn, Cloncurry, Upper Diamantina, and portions of the Boulia Districts. In 1897, it was not being made at Marion Downs, neither on the Mulligan, Lower Georgina, nor Middle Diamantina Rivers. Local names for this ornament are—PPT. *milka*, KAL. *yirraia*, MIT. *yirran-ggal*. In the Burketown area is to be found a similar single

⁵ At Brisbane the yellow top-knots made into bunches on wooden skewers, would be stuck into the hair tied up in a knot at the back of the head; used by "doctors" and great fighting men. Ordinary male mortals would just have feathers from the "Blue-mountain" or "Green" parrot, or (on the coast) swan's down stuck into the tresses of the hair and beard. (*T. Petrie*).

^{5a} See Roth—Ethnol. Studies, etc., 1897, fig. 253.

kangaroo-tooth ornament attached to the hair at the temples, but here used by children only; on Mornington Island, a double tooth-ornament is attached to the temporal hair of the females.

11. *Shell Hair-ornaments*.—At Cape Grafton, around Cairns and Atherton, etc., a comparatively small oval-cut piece of pearl shell is fixed by means of beeswax to the hair of the beard, temples, or forelock. Nautilus shell (MAL. *kopa-kopa*) is similarly used on the Tully River.

12. *Fillets and Circlets*; Opossum, etc., twine.—From the fact that Opossum twine is met with very much more commonly in the western than in the eastern portions of North Queensland, fillets, etc., made from this material are but rarely to be observed in the latter portions of the State; that from the Tully River, where the Mallanpara call it *mitin* after the animal, is the only reliable example that I can call to mind. In the North-Western Districts, the Opossum-string fillet⁶ is made of four separate circlets of Opossum-twine bound together flat by means of four ties, with the result that a band-like ornament over a foot long, consisting of eight closely apposed strands, is produced; the extremities of this composite band are looped into the two tying-strings to be knotted at the back of the head. The Opossum-twine is of the winding type,⁷ being spirally wound around a central human hair core, while, so far as the ties are concerned, they are always made of plant fibre. The strands, as well as the ties, are greased with red ochre—all Opossum-string ornaments are in fact treated in this manner throughout these districts. The fillet has sometimes been observed worn like a necklace in the Boulia District, and both as a necklace and armlet in the Cloncurry District. It is (1897) still manufactured, by males, in the former, but rarely now in the latter, and may be worn by either sex any time subsequently to the first of the initiation ceremonies. Its Pitja-Pitja name is *mungkala*, the same as applied to some other Opossum-string ornaments; in the Maitakudi language it is the *chabo* of the Leichhardt-Selwyn District where exceptionally it used to be made of Rock-wallaby hair.

There are two varieties of the Opossum-string ring or circlet (PPT. *mungkala*, MIT. *woppulara*) in the North West Districts, according as they are single or double. In the former case, according as the central core is thick or thin, around which the Opossum-twine is spirally and closely wound, the diameter varies for different examples; in the latter, the two circlets are fixed

⁶ Roth—Ethnol. Studies, etc., 1897, figs. 258, 259.

⁷ Roth—Bull. 1—Sect. 15.

together with two ties, at places more or less opposite. As usual, they are coloured red and greased. Single Opossum-string circlets are also common along the Lower Gulf of Carpentaria coast-line, where as a general rule they are left free from both pigment and fat; like the fillets of the same material elsewhere, they are made by men only, but here also used by men alone. GUN. minganda. On the Pennefather River Human-hair rope, NGG. prallatana, is manufactured by women for the use of the young men at initiation, when it is tied round the head.

13. *Fillet; Dingo-tail*.—In the Boulia District, a Dingo-tail may sometimes be worn over the forehead like a fillet and tied by string at the back; sometimes feather-tufts may be stuck, and so supported in position, underneath it. The Dingo-tail was also worn by the Brisbane males, who called it gilla; used at corroborees, fights, and first put on at the initiation ceremony. A twine fillet-band was similarly employed by the men. Tied round the forehead of the Kippas at the Kippa ceremony, and worn neither before nor after, was the snake-throttle which, after being cut out would be slit open and wound round a stick to keep it flat, when not in use (*T. Petrie*).

14. *Fillet; Eel-bone*.—The Eel-bone ornament (MAL. wakai) of the Tully River and neighbourhood is formed of two such bones attached (fig. 15), with their concavities inwards, into a blob of beeswax. Several of such units may be attached to a length of fibre-twine, and tied across the forehead at the back of the head; sometimes, it may be fixed and used as a necklace, while on occasion a unit by itself may be seen attached to the fore-lock.



Fig. 15.

15. *Fillet; Nautilus-shell*.—The Keppel Islanders used to string together a few comparatively-large irregularly ovate pieces of Nautilus (yellam), each unit drilled with two holes, and tie the end at the back of the head, the shells resting over the forehead of the men; amongst the Whitunday Island and Cape Grafton folk I also saw true fillets similarly made with double-drilled pieces, but I have never met with them anywhere else. In all three cases these ornaments were also worn as necklaces by the women. Elsewhere, the individual units composing these shell fillets are drilled with a single aperture, through which the double-strand connecting string is woven on a chain-twist pattern. As a general rule, the units are cut rectangular (fig. 16) on the Peninsula and Eastern Coast-line

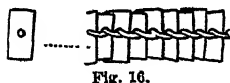


Fig. 16.

but oval on the Lower Gulf shores. It is true that oval ones are occasionally met with around Cairns, Cardwell and the Tully River, but there is reason to believe that they have been bartered from the Carpentaria coast, via the ranges and the Mitchell River. Worn by the men as fillets, by the women as necklaces⁸, at the Bloomfield River, Cape Bedford, and Princess Charlotte Bay. By the time that the Princess Charlotte Bay specimens are bartered to the Middle Palmer, via the Musgrave River, they are worn by both men and women as necklaces only. Local names: KYI. (Cape Bedford) dirl-ngar, KYE. jil-nga, KMI. ni-ra.

16. *Fillet; Toad-stool*.—The only fillet of vegetable origin that I know of is that composed of pieces of the Red Toad-stool (*Polystictus cinnabarinus*, Fries), used by the women at Keppel Island⁹.

17. *Ear-piercing; Ear-rings*.—The piercing of the ears would appear to be peculiar to the Cape York Peninsula. On the east coast it has been observed as far south as the Tully River, but the practice is said to have been acquired here within recent years through the South Sea Islanders and bêche-de-mer fishing-boats. Captain Cook's voyage¹⁰ has a record from the Endeavour River, where the natives were said to "have holes in their ears, but we never saw anything worn in them." I have observed it from Princess Charlotte Bay northwards, in males only, and also with nothing worn, the right ear at Saltwater River, the left on the Princess Charlotte Bay coast-line, and both at Night Island. Occasionally, the aperture may be so artificially enlarged (e.g. at the Coen River) as to allow of the loop so produced being thrown forwards over the whole organ. On the Gulf side, e.g. Pennefather and Embley Rivers, the males also alone have both their ears pierced, and may wear ear-rings which could however be more correctly described as tubes (Pl. ix., fig. 1), they being as much as two and a quarter inches external diameter and over four inches long. Such a tube (NGG. wā amannu) is made from the *Bombax malabaricum*, De Cand. (NGG. buiperi), the core of which is hollowed out with a kangaroo-bone awl, the exterior being subsequently smoothed over with the rough leaves of *Ficus orbicularis*, and finally painted red. In the North Western Districts,

⁸ Sect. 35.

⁹ Lumholtz figures a complicated brow-band from the Central Queensland coast, but I have never found anything like it (Among Cannibals, p. 331.)

¹⁰ Hawkesworth's edition, London, 1773, p. 208.

but alone among the Cloncurry natives and then solely amongst some of the older men, ear-holes in which a kangaroo-bone is said to have been worn, were present (1897); piercing however is never practised here nowadays.

18. *Nose-boring* ; *Nose-pins*.—The nose may be found pierced in both sexes, *e.g.*, Pennefather, Middle Embley, Palmer, Endeavour, and Bloomfield Rivers, Cape Bedford, and whole North West Queensland; pierced in the males, sometimes in the females, *e.g.*, Princess Charlotte Bay; in males alone, *e.g.*, Cape Trafton and apparently in the Wellesley Islands; sometimes, in the males it being non-obligatory, *e.g.*, Rockhampton. The operation is very usually but not always performed by one of their own sex (Pennefather River), is sometimes connected with the initiation ceremonies (Bloomfield River, Rockhampton, Brisbane) while at others is absolutely independent of it (North West Districts, Princess Charlotte Bay). The implement used for the operation is either a pointed piece of bone or hardened wood. A short soft piece of "white wood" is often used immediately subsequent to, and continuously after, the operation during the next few days to keep the wound open; it is finally replaced by the proper nose-pin. At the Macdonnell Electric Telegraph Office the wound is said to be dressed with human breast-milk. At Brisbane, the nose was bored in all males, either before or at the kippa (initiation) stage; women's noses were never pierced. A drizzling rainy day was chosen, and the head held in the lap of an old man who would keep slapping the victim's ears, and shouting aloud while the operation was being done—the rain, the slapping, and the shouting being supposed to take the pain away. Another old man—one who had especially long nails on the left thumb and fore-finger was generally chosen—would then catch hold of the septum drag it down, and, just above, pierce through it a pointed skewer. This was next removed, and its place taken by a short (two or three inches) rounded piece of wood. If the victim proved obstreperous, his hands would be held down. Almost every day, he would go down to the water and, under the surface, slew the stick round and round in the wound, so as to prevent it sticking. This would continue until the aperture was healed enough to allow of a small flattened beeswax marble being inserted in it, and where it would be allowed to remain until the distended opening was completely sound. The ball gave the nose a very swollen and up-turned appearance (*T. Petrie*).

Nose-pins afford much variety in shape, size, and material. On the Pennefather River the half-moon shaped pin (NGG.

i-mina) is made from the shell of the *Megalatractus aruanus*, Linn. Unless the shell is fresh, it is soaked for some two or

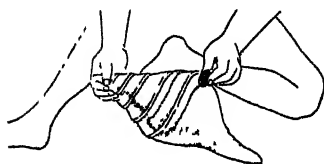


Fig. 17.

three days in water; the operator, by means of a stone, then chips out the portion indicated (fig. 17), and grinds it down with water, the "rib" finally constituting the nose-pin. This imina is employed by men only, the women using a piece of grass. Similarly, be-

tween the Mitchell and Staaten Rivers, amongst the Gunanni, the men alone make and use bone ones (GUN. rau-wôr-injala) and the women grass-reeds (GUN. mo-banggir). Amongst other articles utilised I have observed the unfertilised flower stalk of one of the Banksias (Bloomfield River), a piece of Bamboo (Embley River), or other kind of timber cut bluff at the extremities, spirally ornamented (Cape Grafton) or not, a feather-quill, etc. Wooden nose-pins may also be put in the ear-holes when such have been pierced. On the Embley River the nose-pin (wood or reed) may be decorated with a bead of the *Aden-anthera abro-perma*, F.v.M., or *Abrus precatorius*, Linn., at either extremity; used by the women as a sign of mourning, sometimes by the men as a decoration. Local names: - Capes Bedford and Grafton, tabul; Atherton, yimpala; Tully River, iimbala. PPT. milya perkilli (= nose large).

19. *Tooth-Avulsion*.—The knocking out of one or other or both upper central incisors is practised throughout the Peninsula, the North West Districts, at Princess Charlotte Bay, on the Palmer River and district around it, and on the East Coast, at the Bloomfield River, till very recently on the Endeavour River, and formerly as far south as the Keppel Islands. It is absent amongst the scrub-blacks of the Lower Tully. When present, it may either be connected with, e.g., Keppel Island¹¹, Princess Charlotte Bay, or quite dissociated from any of the initiation ceremonies; the mutilation is not always obligatory with either sex. That the custom has been in vogue for ages past is probable from the fact that in none of these Queensland languages are there any *th*, *v*, *f*, or *s*, sounds, which require these teeth for their proper enunciation.

20. On the Pennefather River avulsion was customary in both sexes and performed after the individual had arrived at the full completion of puberty, after marriage, and in the case of a male

¹¹ On the authority of Mr. W. H. Flowers.

only subsequently to having attended the initiation dances some two or three times. The operation is performed by one of the older men as follows, both sexes being mutilated at the same time. A pit about three feet in diameter is sunk, and a bush-fence constructed along three quarters of its circumference, near the break in the bush a group of elders sit, with a line of women on one side and men on the other, all lying upon their left elbows, each one coming up in turn to undergo the ordeal. One of the old men rests each individual's head on his open thigh, so as to be in a position convenient for pressing a thin wooden pencil on the particular tooth, and so hammering it out; as each tooth falls out he calls out the name of the individual's home, i.e., the locality whence Anje-a brought his Cho-i¹². The teeth are all thrown into the pit, into which the blood is also spat and then covered up, the patient's bodies being smeared over with charcoal.

21. In North-West Queensland, as well as up and down the Diamantina River, this custom of avulsion is gradually dying out; it is a mutilation which is perfectly voluntary, may be practised by both sexes, and most certainly at the present time has nothing whatever to do with any of the initiation ceremonies. In the Boulia District, the gums all round the teeth to be extracted are loosened with the thumb and finger nails; this loosening is then aided by biting hard into a stick held transversely in the mouth for a good ten minutes or so. The individual in squatting position, with head raised, now holds a strong stick vertically behind the two to be extracted, and pushes it firmly upwards and forwards, while a friend hammers away from the front with a wooden "chisel" driven by a heavy stone for a mallet. In the Upper Georgina District the patient lies on his back with head touching the ground, while his friend takes a stick which he presses against the teeth to be removed and hammers away until they are broken out.

22. Around Princess Charlotte Bay, avulsion is a preliminary to betrothal in the case of the males, and to consummation of marriage in the females. The right or left upper incisor may be removed; this is effected by hammering as before, with the individual's head resting on the lap of one of his mates, but here the subsequent hemorrhage is controlled by burning with a fire-stick. The removed tooth is flung into water or buried. From this time onwards the boy leaves his mother's and sister's camps, to sleep with the single young men, though he continues to go

¹² Roth—Bull. 5—Sect. 68.

to his mother's for his meals. Avulsion here always takes place subsequently to nose-piercing.

23. On the Middle Palmer River, the right central incisor is knocked out in both sexes, the left one being occasionally made to follow suit. At Butcher's Hill it is the left incisor, that is removed; here, the victim's eyes are covered so as to preclude the possibility of identifying the actual operator.

24. At the Bloomfield River, the young boys when about eleven or twelve years of age, get one or other of the central incisors hammered out, but this constitutes no ceremony, and is not absolutely necessary.

25. *Necklaces ; Shell.*—The Pennefather River District provides a large number of shells that are utilised for necklaces. Square-shaped pieces of nacreous shell are made by breaking the shell into chips, each chip being next drilled with the onyi drill¹³, its edges bitten with the teeth, finally ground down on white coral, and then strung on a fibre-twine. This form of necklace has the generic name of lankajana applied to it, whether manufactured from the lankajana (*Avicula lata*, Gray, a flat red-backed shell) from the wu-idi (*Meleagrina margaritifera*, Linn.) or from the arrö-anguti (*Nautilus pompilius*, Linn.); worn for purely decorative purposes, by women around the neck, by men over the forehead (as a fillet). The *Solen sloanii*, Gray, pierced at one extremity, and numbers of them strung on twine, is worn by women when in mourning, for children especially, either around the neck or from over one shoulder across to and under the opposite arm-pit; it is called ché-ra-a after the name of the mollusc, most of the other necklaces here being named according to the constituents of which they are composed. The manguru is worn by little boys and girls only, and made from the *Dentalium aculeum*, Gould; the shell is broken up into segments which are strung together, the whole having the appearance of European glass-bugles. The kò-chi (*Olivæ australis*, Duclos) after being stood on its end, the apex gently hit with a wooden hammer, and then chipped off,



Fig. 18.

thus forming an aperture through which the thread passes end to end of the shell (fig. 18); is worn by mothers on the death of an infant; instead of being used on the neck, round and round which it is wound, it may be slung from across and over one shoulder to under the opposite arm-pit,

¹³ Roth—Bull 7—Sect. 42.

while at times it may be seen around men's necks when engaged in fight. The *Columbella pardalina*, Lamarck, is put to similar uses as the Oliva. Between the mouths of the Mitchell and Staaten Rivers, necklaces of the Dentalium (GUN. mandàba-daba), Oliva (GUN. manggo-anda) and (?) Nautilus (GUN. binjé-la) are manufactured and worn by men only, the last-mentioned being additionally used as a fore-head band.

26. *Necklaces; Opossum and Kangaroo Twine.*—There are two varieties of the Opossum-string necklace to be observed in the North Western Districts, one of which is constructed on a fringe, the other on a belly-pattern. The former consists of a main supporting string (a composite basal strand), from which hang some dozens of tassels formed of one continuous length successively twisted upon itself and around the supporting string; each tassel is about four inches long¹⁴. It is manufactured in the Boulia, Leichhardt-Selwyn, and Cloncurry Districts, usually by women, is coloured red and primarily intended for use at corroborees; when made somewhat larger than usual, as is sometimes the case in the Boulia District, it may be worn as a woman's apron-belt. Local names:—PPT, munamalyèri, KAL. and MIT. mittamiko. In the belly-pattern, all the Opossum-hair strands are fixed at either extremity to the tying strings¹⁵, but such necklaces, once manufactured at Glenormiston and Roxburgh Downs are extremely rare; one specimen obtained from the latter station, though manufactured on the proper plan, had the Opossum-string replaced by cotton threads drawn from out of an old sock.

27. *Necklaces: Grass-reed and Pandanus.*—The Grass-bugle necklace is made throughout Queensland. In the North-Western Districts it is manufactured usually by the women and is the badge of the first of the initiation ceremonies, whence it can be worn subsequently, on any occasion, by both male and female. In its simplest form it consists of hundreds of grass-reed bugles threaded on a twine from twelve to sixteen feet long tied at its extremities; the bugles are cut into lengths of from about half to five-eighths of an inch and over, either by means of the sharp edge of a mussel-shell or a stone-knife. Such a necklace can be worn just as it is, as a coil wound round and round the neck, or else rolled up into a thick loop so as to make two bellies of it, the ends being attached to tying-strings¹⁶. In other cases the bugles may

¹⁴ Roth—Bull. 1—Sect. 14, and Plate vii., fig. 6.

¹⁵ Similar opossum-hair necklaces are found on the Tully River.

¹⁶ Roth—Ethnol. Studies, etc., 1897—Fig. 287.

be strung on a number of shorter threads, fixed at their extremities to the tying-strings, so as to form a single-belly ornament¹⁷; or again, two such bellies may be looped together, perhaps the commonest form¹⁸. On the East Coast the grass-bugle necklace is seen from certainly north of the Endeavour River to as far south as the Keppel River, and is made and usually worn only by women; the pattern followed is that of one continuous length of string. On the Tully River, natives of both sexes wear it. On the Lower Gulf Coast, the ornament is made and worn only by the female portion of the community. Local names:—PPT., KAL., and MIT. *konupa*, KYI. *wanggar*, KYE. *yirko*, GUN. *manègora* (made from *ra* grass), MAL. *waln-gara*.

Grass-bugles amongst the Brisbane Blacks were threaded on a length of string knotted at either extremity; it was usually made by the old men and women, but mostly worn by men, at any time. It was called *kulgaripin* (*T. Petrie*).

At Princess Charlotte Bay a necklace (*al-wîra*) worn by the women and especially the younger girls is formed of strips of *Pandanus* leaf worked into a plait of from three to five strands¹⁹.

28. *Necklaces (miscellaneous)*.—Amongst unusual objects I have observed strung together, and worn as necklaces may be mentioned the "calcareous eyes" of a cray-fish, and the vertebral bodies of a young shark, on the Batavia River; and pencils of hardened beeswax attached to a top-string on the Daintree River. In one such specimen I examined at Cape Grafton, whither it had been bartered, and which the local Kungganji Blacks called *o-mor*, I counted upwards of one hundred and fifty pieces of beeswax (fig. 19), each about one and a half inches long, coloured white, and suspended by an attached twine eyelet to the tying-string; it was said to be used by men as a fighting ornament, by the women, as an ordinary decorative one.



Fig. 19.

29. *Cross-shoulder Ornaments*.—Attention has already been drawn to the fact that certain of the necklaces may also be worn as cross-shoulder ornaments, a method of fixation, *i.e.*, from over one shoulder across to under the opposite armpit, which in certain areas indicates a symbol of grief and mourning²⁰. On the other hand, there are indeed here and there a few decorations only worn as cross-shoulder bands. Thus, on the Upper Georgina River, at Headingly, an Opossum-string cross-shoulder

¹⁷ Roth—*Ethnol. Studies*, etc., 1897—Fig. 206.

¹⁸ Roth—*Ethnol. Studies*, etc., 1897—Fig. 264.

¹⁹ Roth—*Bull.* 1—Sect. 11, and pl. v., figs. 1-4.

²⁰ Roth—*Bulletin* 9. (*Rec. Austr. Mus.*, vi., 5, 1907, p. 367.)

piece (the kurmanja of the Yaro-inga) is worn by males and females; on the Pennefather River a strip of Kangaroo-skin tied at the ends, forms an ornament²¹ (NGG. do-ana) that is used by women only at any time. So again, the Pennefather River women may wear on any occasion a cross-shoulder band made of fibre-twine interwoven with the feathers of the Emu or a variety of Blue Mountain-parrot, the decoration being known respectively as the taibe-pra and taibe-mandenuto; but this may also be used by them as a belt or as a sucking-string²².

30. *Chest and Back Ornaments*.—Most of the chest and back ornaments consist of a portion of Pearl-shell, Nautilus, or Melo, drilled to carry the string that suspends it over the chest. On the Pennefather River the Pearl-shell chest ornament (NGG. gamagn) is of two kinds; the shorter and rounder pieces are worn only by a mother on the death of her child, by females when dancing round a corpse (children sometimes using the half-broken ones), while the longer ornaments are worn by the men at corroborees and on other special occasions. The outer layer of shell is removed by placing the specimen on the cold ground, face downwards, and covering carefully with hot ashes, after which the surface can be the more easily removed by grinding on a stone with water, when pearl-shell is scarce, the ornament may be manufactured here from *Malleus vulsellatus*, Lamarck. Further down the Gulf coast, e.g., between the Stanten and Mitchell Rivers, these iridescent-shell chest decorations are worn by men only; the Gunanni terms for them, according to the species of shell, being binjé-la and pin-yertan. On the Eastern Coast line at Cape Bedford, etc., the elongate form of it (KYI. komaral) is used by both girls and boys; on the Tully River it is usually worn by the adults, who speak of it as kwi-anchal. With regard to the Nautilus, this is worn between the shoulders of the men (fig. 20), between the breasts of the women, at Cape Bedford, and on the Endeavour, Bloomfield, Laura, and Middle Palmer Rivers. Owing perhaps to its comparatively fragile nature, I have not observed the regular bartering of this shell to any very great distances inland. Local names:—KYI. milbar, KMI. trila-elpán (same term as applied to the pearl-shell²³).



Fig. 20.

²¹ This strip of skin is cut from the flank of the animal (NGG. udaut-chuko), and the hairs left on.

²² Opossum-twine (barbun) was worn similarly across the shoulders of the Kippas only, at Brisbane (T. Petrie).

²³ A piece of Nautilus-shell, the tulin, was worn between the breasts or shoulders, in both sexes, at Brisbane; it was much valued by the inland blacks (T. Petrie.)

As a general rule, the *Melo diadema*, Lamk., is to be found worn more frequently inland than on the coast line where the Pearl-shell as a decoration is in the ascendent, the iridescence of the latter naturally proving more attractive and so reducing its export to a minimum. The melo travels no inconsiderable distances, e.g., into the Boulia District whither I succeeded in tracing its course through the trade-routes as follows:—From the Gulf Coast-line between the Nassau and Staaten Rivers, where the Gunanni call it *io-anda*, it is brought into Normanton whence it gets to the Nau-an Natives at Mullangera and so to the Upper Flinders and Cloncurry District aboriginals (i.e., Wunamurra and Maitakudi), the Flinders ones bartering it to the Yirandalli Blacks around Hughenden; at the head-waters of the Diamantina River, at Kynuna, and at Hughenden, the Goa folk from Elderslie obtain it from all three sources, trade it down the river to Diamantina Gates and Cork, whence it is brought via Springvale into the neighbourhood of Boulia, where it is occasionally but irregularly seen worn on the fore-head like a Kangaroo-tooth ornament. At Roxburgh Downs and south of that station, as well as elsewhere, I have observed this decoration being imitated by chipping and grinding-down pieces of broken chinaware. Local names:—PPT. kulinjeri, MIT. chikara.

On the Pennefather and Embley Rivers, in fact on both sides of and within the extreme Cape York Peninsula, a flat circular shell chest-ornament may not infrequently be met with; this is made by chipping off and grinding down the base of the *Conus millipunctatus*, Lam., and finally drilling the aperture through which the string passes. Another shell, worn just as it is found, is the *Solarium perditæ*, Hinds; the Pennefather Blacks speak of both these shells under the one name of *dévi-dévi*.

31. In the North-Western Districts, here and there, thick circlelets of Opossum-twine, etc., may be thrown over the head and hang loosely upon the chest.

32. Amongst unusual articles I have seen worn regularly as chest ornaments may be mentioned the large Eagle-hawk's claws, two of which²⁴ are attached moon-shape-like into a piece of cement; two of such double-claw hoops may be fixed to the same neck-string. The claw is brought to Boulia from the north, both from down the Georgina River, and down the Burke and Wills Rivers; PPT. mingkara, KAL. pi-ko²⁵.

²⁴ For an illustration see Roth—Ethnol. Studies, etc., 1897, fig. 270.

²⁵ The testicles of the Kangaroo, with surrounding pouch and skin, after being removed and dried, were cut into slices, rubbed with charcoal, and suspended over the chest by a string (passing through a hole at the edge (*T. Petrie*).

33. *Waist-skeins*.—The human-hair belt, or preferably skein, found throughout North Queensland, except perhaps in the extreme Peninsula, consists of a long piece of double-plaited hair twine wound round and round the waist so as to form a thick skein; the resulting size may be gauged from the fact that a comparatively small specimen when unravelled, was found to measure a length of over twenty-six yards. One extremity of the twine is often attached to a little wooden peg, which, by its speedy recognition, enables the wearer to start unrolling all the more readily. Such a hair-skein into which the knife, tomahawk, etc., is often stuck, may not be removed from the body for weeks, perhaps months, at a time; its very nature precludes it from getting rotten through moisture. In the Boulia District it is one of the ornaments allowed to be worn by both sexes subsequently to the first of the initiation ceremonies; the men usually don it continuously from this time forwards, but the women only at corroborees and other special occasions, though not necessarily even then. In most of the other districts it is the men only who are allowed to wear it, although in several where it is known to have once been in vogue, it is now discarded even by both sexes, e.g., on the Endeavour River where, in Captain Cook's time²⁶, the men are stated to have had "a string of plaited human hair, about as thick as a thread of yarn, tied round the waist." Local names:—PPT. wa-kula, KAL. waniga, MIT. u-rodo, the Yaro-ingo of the Upper Georgina calling it ai-tanja. On the Ponnefather River, fibre-twine waist-skeins are wound around the belly and arms of women only, by whom they are perhaps more often used as mourning strings; they are very often coloured red, made of over-cast twine, and known as tanga-a.

34. *Waist-belts*.—²⁷ Among Waist-belts, i.e., bands, etc., which are fixed in front or behind, there are one or two interesting varieties. Fixation anteriorly however is comparatively rare, the only example known to me being that of the Opossum- (or kangaroo) twine waist-belt (KMI. alu-jo) of the Middle Palmer and Tully Rivers; in the former, the ends are attached in front by means of a knot passed through a loop, in the latter by tying. On the Batavia River, an Opossum-string (NGG. ogwar-

²⁶ Hawkesworth's Edition, 1778, p. 207.

²⁷ The Brisbane Blacks wore waist-bands made of Opossum- and Human-hair twine on the ordinary European fish-net pattern, three to four inches wide and from six up to nine feet long; the Opossum ones were worn at initiation by the Kippas, and subsequently on any occasion, the latter, netted by themselves, being used by the medicine-men only (*T. Petrie*).

agana = name of animal) is used as a belt by the men, but as a cross-shoulder piece or necklace by the women²⁵. The Penne father River District natives have a very pretty shell waist-belt made from the *Olivin australis*, Duclos, the native name of which cowrie (NGG. ko-chi) gives the name to the completed



Fig. 21.

article. The shells are strung vertically as in fig. 21, upon a double top-string, and tightened together, as many as one hundred and seventy having been counted on the one belt; though manufactured and used by women, it may be worn by the males for decorative and corroboree purposes. The same folk also possess a bright yellow-coloured belt made from the prepared outer cortex of the *Dendrobium bigibbum*, Lindl. (NNG. zu-la), the belt itself being called a tchi-li, made by women, the larger kinds are used as belts for the men, the smaller as cross-shoulder bands by the women, on all or any occasion, fighting, dancing, etc. The actual process of its manufacture (fig. 22) has already been described²⁰; a variation has since been met with, which is formed of three strips of cortex and four threads.



Fig. 22.

35. *Waist-circlets*.—A Waist-circlet is invariably put on from below up, great difficulty being often experienced in getting it into proper position. The Opossum-rope waist-circlet (MIT. mun-dolo) is met with in the Cloncurry and Flinders Districts, is upwards of an inch thick, and measures sometimes over a yard on its outer circumference. It is made of a thick skein of fibre—acting as a sort of core, around which a single external strand of Opossum-string (often replaced by fibre, etc.) is over cast; a pattern representing areas of black bands is worked in with hair-twine in this outer layer. In the smaller varieties (i.e., those for females) the internal core or skein may be made of human-hair twine instead of fibre, and there may be a few opossum-string tags, forming a thin fringe as it were, hanging down in front. It is worn by adult males at corroboree time only, by young boys at any time previous to reaching the first stage of social rank, while that for a female may be worn on any and every occasion. On the Middle Palmer, at Cape Bedford, etc., Waist-circlets, with a fringe attached in front, (KMI. mi-na, KYI. yirpi) are worn by the women only; the circlet portion is usually manufactured on a core of human-hair overcast with Kangaroo-

²⁵ I am ignorant of the method of attachment of the two extremities.

²⁰ Roth—Bull. 1—Sect. 12 and pl. vi., fig. 2.

or Opossum-hair twine, while the tassels³⁰ composing the fringe are often made of fibre-twine (e.g., *Careya australis*, F.v.M.). The Bloomfield River women wear a circlet of human-hair or fibre-rope around the waist; it is commonly met with on the older females, and those who have suffered any trouble over a recent accouchment, though in all cases it is looked upon³¹ in the light of an ornament, especially when some red colour is woven into it.

36. *Apron-belts*.—The separate tassels forming the apron of the Pennefather River Apron-belt (NGG. andré-ata) are made on the same pattern as those of the Cape Bedford Waist-circlets; they are strung on a top-string (NGG. ngora) stretched between two sticks, during their process of manufacture, and made of *Careya australis*, F.v.M. (NGG. kuiperi) twine. On completion, the tassel apron is rolled up with the roots of the *Morinda reticulata* (NGG. adá-a) which stains it a yellowish red. The apron varies in depth from two to five inches and is worn double, a loop being inserted in the top-string where folded over, the two ends of the top-string being passed through it as represented in fig. 23, the apron being thus worn double. Such an apron is worn only by the females from the time they begin to toddle and are only discarded at full puberty; the reason given for such a practice is that the exposure of the female genital is indecent, but that when nature provides the hair no further artificial covering is required³². In the hinterland of Princess Charlotte Bay, the Apron-belt is worn only by the women, though I have occasionally observed it put around their necks; it is made of vegetable fibre (*Barringtonia racemosa*, (Gaud., *Bombax malabaricum*, De Cand., or *Malaisia tortuosa*, Blanco), on the same pattern as the Pennefather River tassels already mentioned. The Bloomfield River women sometimes wear a similar Apron-belt, but this has only been introduced of late years³³. Along the coast-line between the Fitzroy River and Broudsound, the women used often to wear a four or five inches deep apron belt of Opossum-twine. The larger sized example of the Opossum-twine munanulyeri necklace has already been noted as occasionally worn by the Boulia District women in place of an apron-belt.



Fig. 23.

³⁰ Roth—Bull. 1—Figs 4, 5, pl. vii.

³¹ According to Mr. R. Hislop.

³² The same practice with the same reason given was in vogue amongst the Brisbane girls with the Opossum-twine apron belt (*T. Petrie*).

³³ According to Mr. R. Hislop's opinion expressed in 1898.

In the Upper Georgina area, at Headingly, the Yaro-inga females wear the Opossum-twine apron-belt, the murrura, either round the waist or neck, the males donning it as a necklace.

There is a male corroboree waist-apron belt found in the district around the Batavia River, with the apron portion formed of Pandanus strips (fig. 24), attached to the top-string in a manner different to what has been found anywhere else in Queensland; it would be interesting to learn what the arrangement is in the corresponding New Guinea female article.



Fig. 24.

37. *Hip and Tail Pieces*.—Throughout the North Western Districts, in times of corroboree and other occasions for rejoicing, and on wife-hunting expeditions, etc., certain ornaments are fixed or rather suspended from the waist-skein in the case of males only. Thus, the pingkara of the Boulia Natives is a bunch of Eagle-hawk feathers tied tightly round at their shafts into the form of a feather-duster and attached by the quill-end on either side of the skein so as to dangle over each hip; it is called a wan-pa by the Cloncurry boys, who let it hang down in the central line behind instead of at the sides. The Boulia tilyeri is a similarly bound bundle of Emu-feathers³⁴, but attached so as to fall between the fold of the buttocks; on the Upper Georgina River, the Yaro-inga may stick this bundle (kwalla-kwalla) upwards behind, such a position indicating the sign of sexual connexion when the wearer comes to steal a woman. The Opossum-string tassel (MAL. mitin) may similarly be suspended posteriorly on the Tully River; at other times it may be seen worn over the chest hanging from a neck-string. On the Tully River stuck upwards into the belt behind is the ombir, an ornament made out of White or Black Cockatoo, Scrub-turkey or Scrub-hen tail and wing feathers; the pinnæ are pulled down on each side of the barb, and the barbs then tied up into a bundle, which when complete makes the whole article look something like a feather-duster. It forms a portion of the special fighting costume³⁵.

38. *Genitalia*.—The epilation of the pubic hair was practised by both sexes on the Proserpine River, but by females only, on the Lower Tully River. At Brisbane, most of the old women,

³⁴ Practically identical with the fly-flicks described in Bull. 7—Sect. 48.

³⁵ At the Brisbane initiation ceremony, the Kippas wore a "tail-business" called wonggin (*T. Petrie*). [The death of Mr. *T. Petrie*, so often quoted in these pages, has just taken place at Brisbane in his 80th year. He was one of the first settlers in that district, and a local authority on Aboriginal habits and customs.]

rarely the younger, would cut off the pubic hair; it was said to be done for the convenience of the males (*T. Petrie*).

Phallocrypts, only used by males at corroborees and other public rejoicings are formed either of pearl-shell or opossum twine. It is somewhat unfortunate that I introduced this term to express certain objects met with in the North Western Districts which I was not then aware were employed rather for purposes of decoration than for concealment.

The chikaleri is a flat, more or less oval, piece of pearl-shell, three to four inches long, fixed with cement to a human-hair twine which in turn is attached to the middle of the waist-skein in front so as to hang over the privates. This pearl-shell which I have only observed in the Leichhardt-Selwyn, Upper Georgina, and Boulia Districts, comes into these parts from the head-water country of the Georgina River, though from which portion of the coast it is originally brought I have not been able to discover; most probably through the Nassau and Staaten Blacks on the Lower-eastern Gulf-coast, they obtaining it by barter from further north.

The kumpara is the Pitta-Pitta name for the Opossum-string form of Phallocrypt manufactured on exactly the same plan as the munamalyeri necklace which is subsequently wound in a spiral round itself, fixed in this position so as to form a kind of tassel, coloured red, and is hung from the waist-skein in front. Sometimes it is used in the hand as a fly-flick. It is manufactured in the Boulia, Leichhardt-Selwyn, and Cloncurry Districts by males only; the Kalkadun name for it is monaro, and the Maitakudi one tungga. These latter people under the same term tungga use a Phallocrypt in the form of two tassels made of Opossum-string, joined by an intermediate portion which suspends the article from the waist-skein; the individual threads of each tassel looped upon themselves, are upwards of a foot long.

Tin-jinna is the Pitta-Pitta name for a sort of miniature kumpara which I have met with only in the Boulia and Upper Georgina Districts where the Yaro-inga folk of Headingly call it pilya; the method of attachment is peculiar in that it is attached to the pubic hair, while on the event of a corroboree it may be painted white, the only occasion on which an opossum-twine ornament out in these areas is coloured otherwise than red. It is manufactured as follows:—A coil of Opossum-twine is wound round the first two or three fingers of the left hand (fig. 25) and tied on the

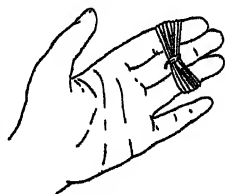


Fig. 25.

palmar side, the coil thus becoming divided into a number of loops. The proximal loop (i.e., the one nearest the palm) is



Fig. 25a.

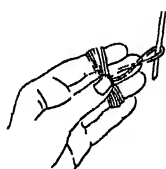


Fig. 25b.

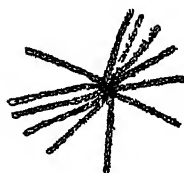


Fig. 25c.



Fig. 25d.

picked up on the dorsal aspect with a little stick or twig (fig. 25a), brought forward, and given a twist (fig. 25b). The twist is then continued by rolling between the forefinger and thumb, and completed by rolling between the right palm and outer thigh; what has thus become a tassel is now held down by the left thumb, while the next proximal loop is made into a tassel, and so on, each tassel being fixed with the thumb, until the star-like article (fig. 25c) is completed, and manipulated into shape (fig. 25d).

39. *Digital Amputation*.—All the Kalkadun women of the Leichhardt-Selwyn District, whom I met, though but a few are 'loft', had suffered the loss of the little finger, the left (Pl. viii, fig. 6). A similar condition is reported from the Northern Territory³⁶, and as the same practice was once in vogue amongst the females in the Rockhampton area, on Fraser Island, at Brisbane³⁷, and even at Sydney³⁸, its original area of distribution must have been a comparatively large one. At Fraser Island, ³⁹, it was said to have been done during infancy by the mother, but when the baby cried too much, someone else had to do it, though in one particular case a woman had done it for herself when a girl. The method employed was by binding the finger tightly round and round with a strong cob-web, or when that was not available, hair-twine, thus allowing the top to turn black and mortify, when it was held in an ants' nest and eaten off. The reason assigned for the custom were that they could dig the yams up better with three fingers than with four, and that when fighting it

³⁶ In certain tribes visited by Mr. H. Basedow the amputation of the right index finger is general (Trans. Roy. Soc. S. Austr., xxxi., 1907, p. 8.)

³⁷ On the authority of Mr. T. Petrie.

³⁸ See G. Barrington's "History of New South Wales," where there is an account given of the operation as performed at Government House for the delectation of Governor Phillip. [For an epitome of observations on this subject see Etheridge—Rec. Austr. Mus., V., 5, 1904, p. 273].

³⁹ From enquiries made through Mrs. Gribble.

was better to get three fingers hurt instead of four! At Brisbane, this mutilation served to distinguish the coastal from the inland women, was performed by similar agency, usually by the old women, and when the child reached about nine or ten years of age. At Gladstone and Rockhampton, the amputation is said to have been performed at the first initiation ceremony.

40. *Armlets*.—Opossum-twine armlets (PPT. mungkala), in the form of circlets are met with everywhere in the North Western Districts, and in a single length commonly elsewhere. Feather tufts may be stuck in underneath them. In the neighbourhood of Burketown, whence they may have been obtained further westwards, the circlets often have tassels, etc., hanging from them. In the Cloncurry District, armlets are either single, made of one length of twine (MIT. jammall), or multiple, made of three or four (MIT. malyeri) and then practically identical with the chabo fillet⁴⁰. On the Gulf Coast-line between the Mitchell and Staaten Rivers (Gunanni Tribe) an Emu-feather twine armlet (yu-ontabola = name of bird) is made and worn by men only.

The Pandanus-strip armlet (fig. 26, 26a) in one form or another is met with throughout the Peninsula, to as low down as the Staaten River on the Gulf-side, and the Bloomfield River on the east coast. In its original form, it is made of a single strip of Pandanus leaf, the ends of which are fixed by splitting, as already described⁴¹; on occasion however, the trouble of making it properly is considered too much, the ends of the strip being simply tied. In the more northerly areas (e.g., Pennefather River), it may be ornamented after drying at the fire with a glowing charred stick so as to make a zig-zag pattern; worn and made by men only for decorative and corroboree purposes. Local names:—KYI. (Cape Bedford) monggan, KWA. rau-al, KMI. anjo-ana (the name of the plant), NGG. agantra (also the name of the plant), and GUN. mallé-anga.



Fig. 26.



Fig. 26a.

The Pandanus-plait armlet is made and worn by men on the Embley River, at the Moreton River, and on the higher reaches of the Batavia River. At the last-mentioned, it may be made

⁴⁰ At Brisbane, armlets were made from the skin cut vertically down the belly of the Kangaroo—this portion of fur was of a lighter colour; it was worn by men on both arms, at corroborees and other occasions for full-dress (T. Petrie).

⁴¹ Roth—Bull. 1—Sect 8 (e).

by women, and called a *langanjinyi* (NGG.), but in that case is fixed around the leg above the calf, and worn by members of their own sex at any time, and also when dancing around the corpse at the burial ceremony. The process of manufacture has already been drawn attention to ⁴².

On the Tully River are to be seen split Lawyer-cane armlets (MAL. *raingkau*) made of a single strip double-coiled (fig. 27, 27a), and fixed according to two patterns, the construction of which diagrammatically has been described ⁴³.



Fig. 27.

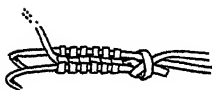


Fig. 27a.

From Whitsunday Island in 1901 I obtained a couple of women's bangles from which a few pieces of *Nautilus* shell hung dependent; the body of the bangle is covered with (?) opossum hair.

41. *Anklets*.—On the Pennefather River fibre-twine with no special name beyond that of the plant from which it has been derived (*e.g.* *Ficus malaisia*), is tied around the ankles, above the calves, and around the waist; worn by men alone, and only at corroborees.

42. *Decorative Scars*.—Decorative scars or cheloids can be recognised from all others, *e.g.*, fighting, mourning, etc. not only by their constant position upon the chest (Pl. x., fig. 1) and upper abdomen, often upon the shoulders and either side of the vertebral column (Pl. ix., fig. 2), but from the fact that they are invariably artificially raised, in some cases quite half an inch above the surrounding surface. These raised scars contain pigment, are quite smooth, have rounded edges, and possess the feel on touch of tough fibrous tissue. They are said to remain many years, but eventually decline; what lends colour to this statement is that, as a rule, the scars among the older men are not so strongly elevated as those in the younger people. The patterns followed are linear, dotted, rectangular or circular, the first being by far the most common, but the results of my various enquiries into any pictorial or other signification, except perhaps on the Tully River, has proved fruitless. Whatever the pattern be, it does not anywhere in the north, as far as could be learnt, remain constant for the whole

⁴² Roth—Bull. 1—Sect. 11.

⁴³ Roth—Bull. 1—Sect. 12.

tribe.¹⁴ nor does it distinguish the different exogamous groups. Amongst the Brisbane Blacks, the pattern did distinguish the tribe (*T. Petrie*). On the Tully River, the more prominent the belly-scars are in a man, the more is he thought of by the women; indeed, in the full development of these particular cicatrices lies the conception of the female's highest ideal of a member of the opposite sex, but women do not care for a boy too soon after he has been cut. Throughout the North Western Districts, on the Bloomfield River, etc., the scarring has nothing whatever to do with the initiation ceremonies, whereas on the Tully River, in the Rockhampton and Brisbane areas it certainly has or had.

43 The place for incision is first of all marked in with charcoal or gypsum, and the cut made with a flaked flint, shell,¹⁵ or quartz, now often replaced by glass; on the Tully River, two incisions are made along the same area, a superficial and a deep one. The account of what follows varies in the different districts, the idea prevalent being apparently to prevent too early union of the edges of the wound, which on the Bloomfield River may sometimes be purposely kept open for a month or two. At Boulia, the natives rub bits of *Portulaca oleracea*, Linn. (the local "Pig-weed") into it for upwards of a quarter of an hour, and say that the nature of the elevation depends upon whether the particular individual has a tight or a loose skin, while the picking at it with the fingers is also subsequently adopted at intervals to make it "jump up." At Glenormiston and at Roxburgh Downs a quantity of bird's or other blood is said to be put on the wound so as to increase the size of the clot, while further up the Georgina River, at Headingley, a boy told me that amongst his own (Yaro-ingu) people the wound is rubbed into with charcoal. The Glencurry Blacks assured me that feather-down is first of all put on to prevent the blood running off, *i.e.*, to cause coagulation, and left there for two or three days until such time as the wound gets "rotten" and the "yellow muck," *i.e.*, pus, runs out; the latter is next removed by rubbing fat into it, and the wound "grows himself then." On the Pennefather River, the scars are briskly rubbed into with the milky sap of *Alyxia spicata*, R. Br. (*N. G. wai-peri*), and on the Bloomfield with clay, whilst the Tully River

¹⁴ Yet here and there amongst certain of the tribe may be observed distinctive scars which are not met with elsewhere (*e.g.*, circular scar around the umbilicus at Prince Charlotte Bay, square shoulder scar at the Pennefather River), giving rise to the suspicion that originally these decorative cheloids may have distinguished tribe or group.

¹⁵ *e.g.*, *Tellina perna*, Spengler, and *Tellina foliacea*, Linn., on the Pennefather River.

Blacks use a kind of white mud (MAL. *marchila*). Nowhere does the process appear to disturb the general health, even when the belly-cuts are made, the native will only admit that he feels a bit stiff for a time.

The dotted elevated scars on the arms I have witnessed being made among the Cloncurry Blacks as follows:—The individual takes a small cold piece of charcoal, half an inch or so in height, and places it on the spot where he intends the dotted scar to be, and then puts a light to the top of it, which, after the preliminary flame is extinguished, goes on glowing until the base is reached, thus letting it burn out to a white ash, with the simultaneous scorching and destruction of the subjacent skin; in two or three days the papule of cicatricial tissue begins to form. I have tried this method on myself without any raised scar resulting, and I am more and more convinced that independently of anything septic or not being rubbed into the wound, it is more or less natural amongst these natives for the scar to become raised.⁴⁶ Similarly, in the case of a half-caste girl in my employ who met with an accidental burn on the wrist and hand, a very elevated scar resulted within the subsequent ten weeks.

44. On the Pennefather River the scars (NGG. *gá-ni*) are similar in men and women. As a rule, these natives do not make them for themselves; married men cut them for the single boys, husbands for their wives. Fig. 28, 28*a-d*, represent the more common patterns on the chest and shoulders. On the



Fig. 28.

Fig. 28*a*.Fig. 28*b*.Fig. 28*c*.Fig. 28*d*.

belly, are a series of transverse ones but these are rarely to be seen below the navel; on the back one or two transverse ones are occasionally to be seen across the lines; again, there is often a short one or two on the thighs.

45. Amongst the Koko-minni of the Middle Palmer River, in front, with both males and females, the usual pattern consists of transverse scars across the lower chest and upper abdomen, vertical ones on the shoulders, and small vertical ones together

⁴⁶ Mr. T. Petrie, who saw Davis, the convict ("Darramhoi"), when he came in after being fourteen years with the natives, tells me that none of his decorative scars were raised.

forming horizontal bands around the arms ; on the back, vertical bands of small horizontal cuts on either side of the vertebral column, and occasionally oblique over on the outer buttocks.

46. To the north-west of Princess Charlotte Bay, the few Koko-olkulo whom I have come across, have a very distinctive small circular scar around the umbilicus, in addition to the transverse ones above. Otherwise at Princess Charlotte Bay, the cicatrices are of the ordinary linear type, seen in both sexes, though of far more regular pattern, design, and distinctiveness in the males.

47. Throughout the North-Western Districts, scars are to be seen in both sexes⁴⁷. As a rule they consist of numerous transverse scars cut across the trunk from about the level of the nipples to the navel, and a few, from one to three longitudinal cuts along the top and front aspect of each shoulder ; using the local Pitta-Pitta terms of Boulia, the former marks are spoken of as tipardo, and the latter as muturu. These are the positions most commonly adopted, but additional ones may occasionally be found, as on the upper portions of the chest and on the back. Amongst the Cloncurry Blacks, on the back are five or six pairs of small cuts on either side of the vertebral column from the loins up, and intervening between these may be found two or three pairs of longer bands coming right round the flanks to join those in the front ; again, here and there may be found additional small dots scattered irregularly over the arms and back. In the Yaro-inga Tribe of the Upper Georgina River I have noticed a couple of transverse scars on the upper arms just below the orthodox longitudinal shoulder ones.

48. At Cape Bedford, both sexes are scarred, with varying pattern about which there does not appear to be anything special to be noted. On the Bloomfield River, raised scars are to be seen only on the men ; transverse on the chest, upper abdomen, and back, vertical on the outer thigh and shoulders. A few transverse ones like armlets are sometimes seen on the arms ; exceptionally among the women, there may be armlets formed of small component vertical scars.

49. On the Tully River, the nature and position of the scars varies with the sexes. In the males, one cut is made on the boy horizontally across the lower level of the great pectoral muscles, about a year or two before puberty ; it is an essential cut, made by the father, or other tribesman, is called *chindal* (MAL.) and

⁴⁷ On Mornington Island they are also to be seen on both sexes.

is believed to assist in making the boy grow. A boy with such a cut is known as a kokai-kokai. The belly-ones (MAL. moingga) are made at the initiation ceremony and are also essential, indeed all males must have both these previously to being married. They are cut somewhat as follows:— About an hour or two before sunset, the bara nut which has been specially prepared by the women is crammed into the novices who, when quite “stodged” so to speak, are forced to drink more and more water, and are not allowed to speak, with the result that the belly becomes grossly distended. The youth lies on his back, with head resting on an old man’s lap while the lines along which the cuts are to be made, are marked out with charcoal. One of the elder men will express a wish to operate and he is chosen, or two may be chosen. At any rate, the operator takes a small flint-flake (kwi-an) between his thumb and forefinger and gauges the depth of the proposed incision by the amount of stone projecting. There is a single quick cut for each scar, and while doing so he calls out “ku! ku! ku! etc.,” this noise being supposed to prevent the youth hearing the sound of the flint as it cuts through the flesh. There are generally about six of these cuts made; they are allowed to bleed well, and finally yellow mud is rubbed all over the belly. If the scars smart and hurt a good deal, it is significatory that they were not cut at exactly the right time, an hour or two before sunset. If long in healing, it means that a woman saw him during the ceremony without his bark-blanket wrapped round him. Lastly, if the scars do not develop prominently it is indicative that he has been tampering with a woman already; such an individual would be ridiculed and called burlchul, a term meaning any small mark. After the belly-cuts, the lad is no longer known as a kokai-kokai but as a ngu-tcha. Among the optional ones, which may be put on at any time are two or three vertical ones on the outer shoulders and a ring of smaller vertical ones on the arm, these scars, like those on the back are known as kargal (MAL.) and are said to have been introduced here from the Townsville District Blacks. Other optional scars are the half-moon ones (MAL. ngau-o) over the breast, very small horizontal cuts on either side of the median line of the chest as far down as the chindal, and pairs of small horizontal cuts on either side of the vertebral column⁴⁸. In the females, the scars, if any, though they are not essential, are put on only after marriage and then by the husbands; they may be cut on the arms and back with small ones on the buttock, but there are never any on the belly.

⁴⁸ For the scars cut on the buttocks of expert climbers, see under Tree-Climbing—Bull. 17—Sect. 8, footnote.

50. In the Rockhampton area, the various raised scars are said to have been usually imposed at the first initiation ceremony. On the mainland, with both sexes, the ordinary run of these consists of a few long transverse cuts across the lower chest and upper abdomen as far as the umbilicus, with corresponding ones behind, and longitudinal scars down each shoulder. These may be supplemented by bands of small vertical cuts on the arms and numerous small irregular ones on the chest, while, on occasion, the outer sides of the thighs may be scarred. Among the Keppel Islanders I found on males and females, both in front as low down as the umbilicus, and back, numerous small vertical rows of scars composed of short horizontal ones in close apposition; furthermore on the outer thighs of the females a single composite vertical row of horizontal ones, and on the upper arms (also in the males) a few transverse rows of short vertical scars.

51. Amongst the Brisbane Blacks⁴⁹, the pattern of the scars was alike for the one tribe, both men and women. Boys and girls when they were about eleven or twelve years of age were operated on by men, and then received their chest- and back-marks (fig. 29, 29a), and (the girls only) their shoulder-scars; it was only at their initiation (kippa) that the boys got their shoulder ones. The Moreton Islanders and inland blacks had belly-marks right across as low down as the navel; further north, the belly-scars were cut on either side of the middle line. Each tribe indeed had a different pattern, alike for its male and female members. The incisions were made with a flint or shell, and rubbed in with the fine powdery charcoal obtained from the sapling bark of the Blood-wood (*Eucalyptus corymbosa*, Smith); within a week these scars would be observed raised,

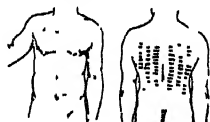


Fig. 29. Fig. 29a.

52. *Feathering of the Body.*—Feathering of the body is in vogue throughout all the North-Western Districts, and here and there in the Peninsula, in the Cardwell area, etc., but limited to men only at corroborees, fighting, or wife-hunting expeditions (Pl. x., fig. 2). In the North-West, white feather-down required for the purpose is obtained from the duck, wild-turkey, etc.; it can be made red when that colour is wanted, by dusting the feathers over with greased red ochre which has been previously pounded on a nardoo or other pounding stone. These two sets of feathers (no

⁴⁹ Notes from Mr. T. Petrie.

yellow ones are made) are put by and retained for subsequent use in respective dilly-bags, koolamons, etc. A sufficient supply of blood, obtained by the ordinary bleeding process⁵⁰ from the posterior ulnar vein, is collected into any convenient receptacle. This blood, by means of feathers tied to the end of a stick, is painted over the required pattern, previously delimited with gypsum, and dab upon dab of feather-down put on—this remaining in position with the coagulation. Sometimes, the whole day may be thus occupied in preparing for the night's festivities, but no women or children are ever allowed to watch the procedure. In the Cardwell area the whole of the individual's head face and body, back and front, except the hands, feet (and sometimes, calves and shins)⁵¹ are covered entirely with white cockatoo feather down after the parts have been smeared over with the milky juice derived from the *Alstonia scholaris*, R.Br. The more carefully the warrior is thus decorated, the more successful in the fight is he supposed to be.

53. *Painting of the Body*.—It would be practically impossible to give a detailed description of all the different designs adopted in body painting, be it for occasions of rejoicing, sorrow, or fighting, and I accordingly propose only mentioning a few of the more typical patterns ordinarily met with, omitting all mention of the many different ornaments and decorations already detailed which will generally be found accompanying them.

In the North-Western Districts⁵², at corroborees, or other causes of rejoicing, certain transverse and somilunar bands of white paint, or greased yellow and red ochre may be daubed on. On similar occasions, and also at any time, the women throughout the Boulia District may adopt a greased yellow or red tri-linear pattern. This is put on by means of the three first fingers dabbed simultaneously on the paint, and then smeared sinuously but separately along the limbs, both upper and lower, and more or less transversely across the trunk.

On the Pennefather River a flash painting of the males would be somewhat as follows:—Charcoal over the forehead; a white band from either eyebrow down the front of the ear, along the side of the neck, down the shoulder and arm; a dab of red on either cheek; alternate white and red bands across the chest; and one mass of red over the fore-arms, lower extremities and back—this mass of red may be broken up into fine longitudinal lines by scraping with the back of the shell of *Cardium verte-*

⁵⁰ Roth—Ethnol. Studies, etc., 1897—Sect. 283.

⁵¹ Roth—Bull. 4—Plates xxix and xxx.

⁵² Roth—Ethnol. Studies, etc., 1897—fig. 275, and figs 283-292.

bratum, Jonas, after the manner of a house-painter's graining-comb.

At Cape Bedford, body-painting is indulged in only by the men. Red, white, and yellow are the colours, mixed with water, which are put on in horizontal rows as far down as the waist, but below that in vertical rows.

On the Bloomfield River, painting varies according to the purposes intended—mourning, fighting, initiation or general corroborees. For any purpose, the women are only painted in designs on the face.

Amongst the Lower Tully River natives, no particular patterns are followed but a general smear all over with one or other pigment. The body is thus painted not only for decorative purposes but also for comfort; a very cooling effect on a broiling hot day. Hardly any ornaments are worn by the women, and comparatively few by men.

In the Rockhampton District, red ochre was often used for smearing in vertical streaks down the trunk and limbs, while the Keppel Islanders would often paint the trunk and limbs in vertical bands of alternate red and white stripes, both front and back, with the head completely raddled.

54. *Cloaks and Rugs*.—The manufacture of Opossum-cloaks and Kangaroo-rugs is now a lost art in Queensland, and in the course of all my wanderings I have never seen a single specimen. The preparation of the leather however has already been drawn attention to⁵³.

55. *Plaited-Blankets*.—These were made on the Embley, Pounefather and Batavia Rivers, up to within recent years, so late as 1899; I watched some being made on the Batavia River, where the Nggerikudi folk speak of them as anji-ana-anji. They are of two types, circular and rectangular. The former is manufactured from the whole stems of the *Maleocharis sphacelata*, on a chain-twist pattern⁵⁴ from a central core, and working

⁵³ Roth - Bull. 7—Sect. 12. Mr. T. Petrie says that at Brisbane an Opossum-skin cloak six by four or five feet, sufficiently large for two people to shelter under, would be made up of from thirty to forty skins, cut in squares, and edges over-cast with kangaroo sinew; the holes were pierced with a pointed kangaroo or swan bone, sometimes a porcupine-quill, and the tendon passed through by hand. After the cloak was thoroughly dry, after the sewing, it was scarred over by means of stone or shell into straight-line, cross-hatch, or S-shaped patterns, and then covered with red pigment. The hairy side of the cloak was next to the people lying underneath it. The kangaroo skin, from one animal, was prepared in similar fashion, and laid upon like an under-blanket.

⁵⁴ Roth—Bull. 1—Sect. 29.

round and round until the required size is obtained; sometimes emu-feathers are worked into it. The completed blanket is said to be very warm for sleeping under on cold nights. The rectangular variety is made from split Pandanus leaves also on the chain-twist pattern, but woven from side to side, somewhat after the style followed in the Pandanus colanders⁵⁵. All plaited blankets are manufactured by the women.

56. *Bark Blankets*.—Sheets of soft tea-tree (*Melaleuca*) bark are often to be found used as blankets in cold weather, in many districts, and would appear to answer the purpose admirably. On other occasions the inner bark of various Fig-trees, e.g., the Ribbed-fig (*Ficus pleurocarpa* F.v.M.), *Ficus chretoides* F.v.M., undergoes special preparation before its conversion into a pliable coverlet. At Atherton, some six or seven years ago, I had the rare good fortune to be an eye-witness of the entire manufacture of such a bark blanket. The individual who made it climbed a *Ficus pleurocarpa* tree (the local kar-pi) to a height of some forty feet and there removed a sheet of bark, the entire circumference of the trunk. The removal was effected by transverse cuts above and below, joined by a vertical one, and pounding along its connecting edge as it was being picked off the tree; in

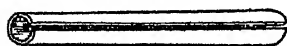


Fig. 30.



Fig. 30a.



Fig. 30b.

former times, he told me that this pounding was done with a stone. On regaining the ground he uncurled the sheet so removed (fig. 30) which was now very moist on its inner surface, and which measured about forty-two by twenty inches. He next rolled it in its vertical length (fig. 30a) with the external layer of the bark outside. Across its width, about four or five inches from the free end, he made an incision with the sharp edge of a broken piece of Candle nut (*Aleurites moluccana*, Willd.) shell; this cut however only went through the thickness of the outer layer, which thus formed a kink (fig. 30b), and so enabled him to obtain two free edges to pick up and tear off. The smaller piece of outer bark he had but little difficulty in removing, the larger taking some considerable time; the sketches (fig. 30c, d) will serve to explain a couple



Fig. 30c.



Fig. 30d.

⁵⁵ Roth—Bull. 7.—Sect. 52.

of the positions assumed in this manipulation, which required no small amount of strength, judgment and skill. The outer layer of bark, not being required, is now cast aside. The next stage in the procedure is to find a suitable tree—suitable in the sense that it has a comparatively large root-branch exposed above the surrounding ground-surface which can be cleared of its bark, and used as a table. Upon this convex table, the oblong sheet of internal bark is placed, and hammered on its inner surface with a piece of wood (fig. 30e) shaped like a narrow cricket-bat with handle cut-short, the whole implement measuring about twenty-four by two inches. The blows

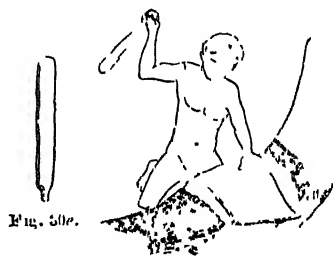


Fig. 30f.

are inflicted (fig. 30f) with the bat's edge struck sharply in a slanting direction at an angle with the run of the fibre, considerable force and rapidity being brought into requisition. During this process the bark-sheet (drawn as it gradually is more and more towards the operator) gets struck in its entirety, simultaneously becoming softer and more pliable, thinner, and correspondingly-increased in surface area. Doubled on its outer side, so as to leave its inner surface again exposed, it is again hammered along the same lines of direction as before, the doubling, pounding, etc., being further twice repeated until what may now

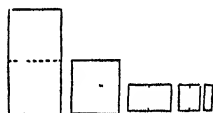


Fig. 30g.

be called the blanket is folded into a package, about a foot long, a size just convenient for carrying in a dilly-bag. The sketch (fig. 30g) will illustrate the method of doubling which takes place; I draw special attention to this because the other examples only met with in the Cairns and Cardwell Districts are folded on almost identical lines. The blanket is next opened out

and exposed to the sun with a view to getting all the moisture out. The particular one under consideration measured on completion four feet by two feet four inches, and took between five and six hours to make. It proved of still further interest in that I had an opportunity of watching the operator

mend an accidental tear (fig. 30*b*). This he did with a piece

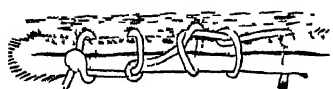


Fig. 30*b*.—The proximal end of the sewing string (on left of figure) is not tied but prevented from slipping by means of a knot in it, suspended by the next loop. The distal end of the sewing string (on the right of the figure) is also prevented from slipping by means of a knot. The sewing was carried out from proximal to distal (left to right of the figure).

of fibre-twine and a sharply pointed piece of wood, cut just for the occasion, though it is not to be denied that the mend showed considerable puckering. Local names:—NGI. wo-nian, CHI. and NGA. kambilla, MAL. magura (=name of the *Ficus ehretoides* from which der-

ived) and keba (=name of tree not identified).

BULLETIN No. 16.

HUTS AND SHELTERS.

(Plates xi.-xvii., and Figs. 31-42.)

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1. Undoubtedly there are certain definite types on which shelters and habitations are constructed, *e.g.*, breakwinds and temporary shelters, bark-covers, huts with a square framework, huts with a dome framework—but of true genealogy or relationship it is difficult to speak with certainty. The break-winds would naturally appear first, though the ridge-pole designs with forked uprights are probably of Papuan introduction; indeed, the latter arrangement is certainly connected with the square framework hut met with only in the Peninsula and in the North, but whether connected in the way of progress or retrogression it is impossible to say¹. The common arrangement of two more or less bent sticks interlocking at their forks, met with at such widely separated areas as in the districts around Rockhampton and the whole North-West, coupled with the interlocking of a forked with a purposely-cracked stick at Brisbane, may point to a condition of affairs where the ridge-pole has been done away with, the two forked uprights coming into close apposition, while the simple (single-piece) hoops met with on the Tully River and Coast-line northwards may be an imitation accounted for by the substitution of a pliable material (*e.g.* *Calamus*, sp.) met with locally in abundance. Any (a) single bent withe or hoop, or (b) two bent withes tied or otherwise interlaced on top, or (c) two forked sloping uprights locked at their forks, will con-

¹ Traces of the forked-upright method of construction were met with in the scaffolding upon which the corpse was laid in the Brisbane area:—See Roth—Bull. 6—Sect. 13, fig. 60.

stitute an arch supporting the dome roof. Not only is it thus quite possible that the square or dome-like basis of construction of any hut is more intimately connected than might at first sight be supposed but that the different varieties of dome-type also bear intimate relationship as expressed in the following table:—

Huts with a dome framework.

Framework	Arches	Supports	Hut-entrance formed by
A. Multiple, i.e., formed of many arches	(a) parallel with one another (Sect. 4) ..	.....	one of the arches
	(b) cross-wise with one an- other (Sect. 5)	... ..	interspace between any two arches
B. Simple, i.e. formed of one arch held in position by.. ..	.....	(a) a single support ²	(i) the whole arch (Sect. 6, 7)
			(ii) either the arch alone or with the support (Sect. 8)
		(b) many supports	(iii) the whole arch divid- ed by the support (Sect. 9)
			portion of arch and one of the supports (Sect. 10).

The scooped-out camping grounds of the Wellesley Islanders and the excavated huts of the Boulia District may indicate traces of an under-ground or cave-dwelling population.

In most of the camps there is a special hut for the use of the unmarried men, unmarried adult females always staying with married relatives, never by themselves.

Camps may be shifted on account of death, if there has been a good deal of sickness about, though more generally on account of fleas, vermin, refuse, as well as scarcity in the local food supply.

2. Independently of the protection and shelter provided by natural forms, e.g., overhanging bushes, cave-shelters, etc.,

² After the manner of a tripod.

the most primitive form of artificial break-wind is to be seen in the native camps scattered over the Wellesley Islands. This is composed of bundles of grass (Pl. xi., fig. 1; Pl. xii., fig. 1), cuscuta, leafy switches, or blood-wood boughs with the stems outwards, just thrown on the ground and arranged in such fashion as to form a semicircular hedge up to between eighteen inches and two feet high surrounding the circular excavation in which a couple or more blacks will be lying curled round the central fire. The fact of these natives sleeping without any hut or covering whatsoever may account for their rising with the early dawn, a most unusual circumstance. It was also strange that on the four or five occasions that I examined this group of islands, no evidence was observable of the apparently numerous pits described by Flinders, although it is possible that in the interval between his visit and mine—upwards of a century—the pits have become shallower and shallower until they are now represented by the circular excavations referred to.

Other early types are those where the ground or a tree convenient are utilised. Thus, instead of the bundles of leafy switches being thrown down in a heap one on top of the other, they are now fixed vertically into the soil, and inter-twined with others, and with tussocks of grass maybe, placed cross-wise. Such a break-wind for instance would be observed anywhere and everywhere; in the Boulia District where it is usually from about two and a half to three feet high and known as a walló-a or yangko³, it is often to be seen on one or both sides of the hut-entrance so as to protect not only the fire itself but also the individuals who may choose to be squatting down in the open around it. Or again, as in the Lower Tully area, a stick or sapling may be tied up at an angle to any convenient tree, and some leafy switches leant up against it. A remaining early type (Pl. xiii., fig. 1) is a sheet of bark fixed lengthways and edgeways into the ground though even this apparently simple arrangement means at least ability to climb a tree, the knowledge of how to remove the bark, and the possession of special tools to effect the purpose.

Amongst more advanced varieties are the winji-winji of the Boulia District, and the ridge-pole shelter of all the more northern area of the Peninsula. Strictly speaking, the former is any temporary bough-shed for protection from rain should it suddenly come up and is built of light sticks grass and bushes. A very common arrangement⁴ is to have it attached to the hut

³ It is called rnyí-i on the Pennefather River.

⁴ Roth—*Ethnol. Studies*, etc., 1897, fig. 248.

with a view to sheltering the fire which is usually kept burning just outside the entrance. In such a case the two "back-bones" of this kind of winji-winji are built as high as, or higher even than those of the attached habitation and the "legs" instead of being fixed vertically are kept in position more or less horizontally one above the other by being stuck into the vertical interspaces surrounding the original entrance-way; the occupants pass in and out on either side of the fire between it and its shelter-cover.

The ridge-pole would appear to be the most advanced of all, not only in principle, but in the requirement of specialised, *i.e.*, forked, uprights. Such an arrangement may be simple or multiple, in the former case completed with some leafy switches leant up against it (Pl. xiv., fig. 2); in the latter, a couple may be placed side by side (Pl. xv., fig. 2), the overlaid foliage constituting a shelter from the sun when well over-head, or linearly to form a palisade. There may be an extra thatch of tea-tree bark in certain cases.

3. The simplest form of bark-hut met with is that composed of a single sheet either curved or more usually bent at its middle (Pl. xvi., fig. 2), the ends being firmly fixed into the soil.



A development of this is where, as on the Pennefather River, two or three such bent sheets overlap one behind the other, the extremities being fairly jambed into the sand which is heaped up against them slightly; it is known locally as *rju-ini* (fig. 31), the same

name given to the oval-framework hut made here and on the Batavia River. On the Jardine River, on the extreme north of the Peninsula I have seen a single-sheet bark hut with one of its otherwise-open ends enclosed with leafy boughs.

4. On the Lower Tully River the following is the orthodox method of building a hut (fig. 32):— Three pairs of unsplit withes *abc* are fixed in position, their ends bent over, and tied on top with lawyer-cane. Three hoops are thus formed, the middle *b* being the tallest, and *c* ultimately forming the entrance, the smallest. Beyond the third arch, some five or six pieces of split cane are stuck into the ground, bent over, and tied (not usually interlaced) on to the arches as to constitute the framework. The next thing is to thatch which is done either



Fig. 32.

with grass (Pl. xii., fig. 2), leaf, or bark. The grass employed is the "Blady-grass" (*Imperata arundinacea*, Cyr.) growing from two and a half to three feet long; handfuls of it, with the butts down, are laid against this framework all the way round, to be similarly followed by another layer but with the butts up. These two layers of bundles are next fixed in position by means of a split cane which, fixed to one side of the doorway, passes right round the hut, perhaps tied here and there to the frame-work on its course, to be attached to the other side of the entrance. Then, with the butts up, the builder starts again with a single row of thatch, but fixes it with cane as he goes along, round and round, spiral-wise, until he gets to the top. Finally, at the very top he puts on some tea-tree bark or palm-leaves, a couple of boughs resting on them and so keeping everything in position⁵. The area enclosed by such a hut (MAL. *kanna*) is of course oval, while the height is usually well under four feet; the ground within is not excavated, nor is the earth shovelled up around on the outside, although this practice has been learnt of late years. The leaf used for thatching is that of the Lawyer-vine (*Calamus* sp.) and Fan-palm (*Licuala muelleri*, Wendl. and Drude) though unfortunately I never enjoyed an opportunity of watching their employment. Where the thatching is of Tea-tree (*Melaleuca*, sp.) it is put on as follows (fig. 33):—A long sheet (a) right round the base of the hut, then vertical pieces (b) with their ends tucked into the frame-work and overlapping the long sheet, to be followed by several pieces laid horizontally on top (c), all kept in position by means of a heavy log or two.



FIG. 33.

Round the base of such a bark-thatched hut, sand is thrown up against it to a height of five or six inches with a view to prevent the bark from springing out. Both men and women build the huts here.

5. Along the Coast-line northwards, e.g., at Cape Grafton, the Bloomfield River, Cape Bedford and around the shores of Princess Charlotte Bay, there is a tendency to construct the circular framework of these huts by firmly sticking the saplings or switches composing it into the ground along the limits of the area to be enclosed (Pl. xvi., fig. 1), and then bending them over

⁵ The hut for the special use of the boys during their initiation is similarly grass-thatched, but is a very much larger building, and has no bark or palm-leaves on top.

and tying, not inter-locking, so as to form a series of hoops crossing one another; these hoops are finally strengthened by transverse and oblique pieces fixed across them, in and out. At Cape Bedford, the hut (KYI. bayen) may be built of five or six such crossed hoops (KYI. karar), at Princess Charlotte Bay of over a dozen, the future entrance (KYI. barkar mouth) being constituted of one of the intervening spaces; sometimes, there may be two such entrances. The thatch is either of bark, blady-grass, lawyer-vine, cycad- or palm-leaf according to the local vegetation, and certainly both on the Bloomfield River and at Cape Grafton, the leaves are invariably commenced with *from the top*, succeeding layers being placed from above down, heavy boughs or rather logs weigh them into position, the rain being kept out not so much owing to the arrangement of the leaves as to the quantity put on. Furthermore, the leaf thatch may, as at Cape Grafton, be preceded by odd scraps of bark, placed more or less vortically so as to act as drains for the rain. The height of these huts averages about four or four and a half feet; there is no floor excavation. There is usually a fire burning inside the structure when built for winter-use, and one or two entrances according to the size of hut. Thus, on the Bloomfield River, a man with one wife and a small family will occupy a hut with a single entrance; if he has one old wife, and other wives and children, a larger habitation will be used, the old woman having a separate entrance and separate fire to herself.

6. A similar type of hut⁶, made by the Brisbane women, was often seen at Eagle Farm, on the Coast-line, and at Bribie and Moreton Islands. It was much larger than the other made by

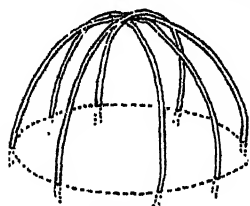


Fig. 34.

the men, being about nine feet across and four feet high. It was constructed of a series of four hoops (fig. 34) crossed, stuck at both extremities into the ground, the timber employed being the local wattle or "oak". Filling up the segments, other straight withes were stuck into the ground with their tips tied to the hoops where they crossed each other; there were no sticks fixed in obliquely or transversely, indeed, no interweaving. One of the segments was left open, to act ultimately as an entrance. The whole was then covered with sheets of tea-tree bark, but (unlike the bark-hut made by the men) these were placed transversely and made to overlap after the manner of a shingle roof, with a

⁶ According to Mr. T. Petrie.

large one on top hanging over the "door" which was only just big enough to allow a person to crawl in; heavy sticks were leant up against the bark to keep it in position. These huts were mostly made in winter-time, and would hold eight or nine people; a small fire was kept glowing inside in the centre.

7. In the hinterland of Princess Charlotte Bay, across and in the Peninsula to the opposite Coast-line on the Pennefather River, the dome-framework type of hut shows a formation of door-way similar to that met with on the Tully River, namely in the possession of a special hoop of its own (fig. 35), supported at its apex by another bent with the tied there at right-angles, on to which the remaining scaffolding is attached. For instance, on the Kennedy River, I watched the construction of the "Cabbage-tree" palm-leaf (*Livistona australis*, Mart.) hut represented in Pl. xvii., fig. 2. Gnarwin, the head of the local tribe made it for himself and wives, who are here represented. Withe ¹ bent over into a hoop and fixed into the ground at both extremities, forms the door-way; withe ², placed at right angles to it and tied, has successively attached to it, the remaining withes in the order indicated, all of which are subsequently strengthened by bent sticks interwoven or otherwise attached more or less obliquely. In this particular instance there did not appear to be any definiteness in the arrangement of the



Fig. 35.



Fig. 36.

axes of the leaves, up, down, or sideways, the whole being prevented blown away by means of heavy timbers fixed firmly into the ground and pressing at an angle against them. Fig. 36 shows a similar method of construction from the Pennefather River. Two long withes ¹, ², twisted around each other for strength and stability are fixed in the ground at either extremity, hoop fashion, and tied low down on each side; this double one constitutes the future hut-entrance which is always turned away from the prevailing wind. Withe ³ is fixed in at its base at a point about midway between the imaginary line joining the bases of ¹ and ²; it is bent down and either by its own spring held under the top of the original hoop, or else jammed into its interstices, or else tied there. Nos. ⁴, ⁵, etc., are then attached in similar fashion, usually by their own elasticity, but also interlacing one another may be on top. Sheets of bark (*Melaleuca* sp., *Eucalyptus tetradonta*, F.v.M.) are next put on, and held in position by logs as before. The

Normanton huts, for wet season use, shew a similar basis of construction, and are thatched with grass; the entrance is comparatively small (Pl. xiv., fig. 1).

8. This tripod basis of construction of a dome-frame work hut—represented by the two halves of the hoop and its support in the previous examples—is paralleled in the Rockhampton and Brisbane areas, with the distinction however that the supporting withe divides the comparatively large door-way, which occupies one or both sides of the tripod. Thus at Gladstone, Miriam Vale, etc., I have often observed such an arrangement made of two forked sticks (fig. 37) interlocked with a third support, the bark sheets being loosely attached on whichever aspect required⁷.

9. Again, at Brisbane⁸, with the ordinary type of hut made by men, a stiffish withe would be cracked, not broken in two (by bending over the top of the head, and pressing the ends down with the outstretched hands) and stuck at either extremity into the ground, the bent portion being supported by a forked stick similarly stuck into the soil (fig. 38). On the side of the bent cross-piece or hoop, further removed from the fork, were slanted up against it several secondary withes, their bases in the ground limiting the floor-circumference of the hut. Up against the secondary sticks were vertically placed sheets of tea-tree bark, and covering them on top was an extra large sheet after the manner of a ridge-cap (fig. 39). To prevent cold wind passing in between the edges of these sheets, two would be placed side by side and one in front (fig. 40); while, to keep the sheets in position a trench was dug and the earth thrown up against them all the way round. If wind was expected, heavy poles were laid upon the sides and top. The comparatively large "door" or rather opening of such a habitation was always in the direction whence its occupants had come, its position having nothing whatever to do with the prevailing winds; if however the wind proved too strong in

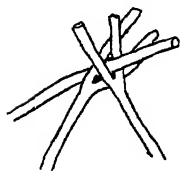


Fig. 37.



Fig. 38.



Fig. 39.



Fig. 40.

⁷ At Rockhampton such a hut was known as a tu-ra to the local Tarum-bal Blacks.

⁸ From notes supplied by Mr. T. Petrie. These huts were known as nguduru after the Melaleuca bark with which they were thatched. Dalu, signifying fire was the name applied to a camp in general; it also signified home in the same sense that we speak of hearth.

he door-way, a break-wind would always be put up in front, the fire being between it and the entrance. Such a hut was about four feet high. Supposing the blacks were travelling, and a woman had no baby she might be seen carting the bark-sheets for the hut to be erected at the next camping-place, especially if it were known that there was no such bark in its vicinity. On other occasions when travelling and no tea-tree bark was available, they might use "stringy-bark," "iron-bark," or "gum" though not so good; failing these, they would thatch with tussocks of long "blady-grass," beginning from below up, and fixing them in position as before with heavy sticks pressed up against them.

10. Over the larger portion of the North-West Districts another type of dome-frame hut is to be observed; this is the kurau-i of Boulia⁹, the yin-bur of Cloncurry, etc., which is originally designed for withstanding rain, but now devoted to indiscriminate use, and is almost always constructed on a piece of high ground, so as to ensure the more rapid disposal of the water. Building operations are commenced with two naturally-bent forked saplings which are fixed deeply into the ground below—and made to interlock above; to obviate the trouble of finding and cutting suitable lengths of the orthodox forked pattern they may occasionally be seen manufactured with spliced timbers and tied. These two primary supports pass by the name of wandaru (PPT.=back-bone) their lengths varying according to the size of hut required, the summit of which on an average is about four feet and upwards from the ground-level (Pl. xv., fig. 1). Pressing up against them on either side are a number of lighter saplings or prinna (PPT.=legs) fixed firmly into the ground along the area to be enclosed; to allow for the future entrance or tera, the prinna are omitted over the larger portion of the base end of one of the wandaru, the particular "leg" limiting the doorway not being necessarily always larger or in any way specially distinctive from the others. Along the intervals between the prinna, light bushes are laid and intertwined with their foliage down, these being followed by tussocks of grass, then a coating of mud, and lastly by another layer of bushes (Pl. xvii. fig. 1), but the covering of mud, which requires no inconsiderable time and skill, is often omitted. The ground-space enclosed by the hut-wall is more or less circular in the smaller varieties, somewhat elliptical in the larger. If the rain beats in at the door-way, the aperture is just covered in with an armful of bushes thrown up in front of it, and if the hut, as in the larger sizes, has two entrances,

⁹ Roth—Ethnol. Studies, etc., 1897, figs. 247A and B.

the rain can be thus easily blocked from either quarter. The level of the ground inside is not purposely lowered, though what with the constant treading upon, it often gives one this appearance. In the Cloncurry District specimens, in addition to the thatch already described, the whole is usually covered with bark-sheets retained in position by means of heavy boughs resting on top. Talking of bark reminds me that so far as the district around Boulia is concerned—and the same holds good for certain other areas—its use as a wall-covering is unusual in the construction of any variety of hut, but whether this is due absolutely to scarcity of timber it is impossible to say, though the advent of the European has been certainly responsible for its substitution by cattle-hides and galvanised iron with an accompanying degeneracy in the framework. The annakadyi is another kind of Boulia District hut built on a similar scaffolding as the kurau, but designed especially for warmth, and so for use in the winter months. A flat-bottomed hole is dug into the ground to a depth of about one and a half feet, or even more, the rather elliptical outline of its sides forming the limits of the habitation to be erected over it, the bottom of the excavation constituting the future floor. The frame-work of “back-bone” and “legs” is next inserted. Wet grass is then collected and wedged into the spaces intervening between the prinna, and thick layers of mud covered on; the mud thus moistened soon becomes hardened and, by means of the grass, fixed in position; a ring of wet mud about a foot in width is finally smeared round the limits of the entrance for which it forms a sort of artificial door-frame, and at the same time gives it a rather ornamental appearance. On completion, a big fire is kindled within, near the further side, opposite the door, with the result that, by sun-down, when the embers are removed, the place is warm enough to sleep in. The introduction of European clothes and blankets has however been responsible for the gradual and marked disappearance of this particular form of hut. Finding that they can obtain protection from cold by the use of such coverings, the natives are dispensing more and more with these structures which entail no inconsiderable amount of time, toil, and patience in their making; the change itself, owing to these civilising influences, has not been a sudden one, the depth of the floor below the ground-surface having been slowly decreased, while the height of the hut above ground has been correspondingly increased¹⁰.

¹⁰ Mr. J. Craigie, late of Roxburgh Downs, had noticed this gradual modification in height and depth during a stay on the Georgina River of upwards of seventeen years, but the explanation was given me by the Boulia natives.

11. North of the Palmer River, scattered right through the Peninsula, up to certainly the Embley River on the Gulf Coast, is to be seen a type of hut built on a square framework on the principle of a ridge-pole supported by two upright-forked sticks, very commonly of *Pandanus*, the dichotomous growth of which lends itself admirably for the purpose. In its simplest form it consists of a single ridge-pole (fig. 41a) over which a sheet or sheets of bark are made to rest; in May, 1902, at a spot east of the telegraph line between Moreton and Macdonnell I passed a native encampment made up of a series of these, fixed end on end, like a huge tunnel quite thirty feet long. On the



Fig. 41a

Fig. 41b.

Middle Palmer, the Koko-mum make use of the bark obtained from one or other of the following timbers:—"Iron-wood" (*Erythrophloeum labouchei*, F.v.M.), *Melaleuca* sp., "Mess-mate" or "Box-wood." In the next stage the hut will consist of two ridge-poles similarly supporting a bark-sheet (fig. 41b). Then comes the condition where short sticks are laid across the ridge-poles to form a bunk upon which an individual may sleep at night, and below which shade may be obtained by day. These



Fig. 42.

sleeping platforms (fig. 42) are common in the hinterland of Princess Charlotte Bay, a sheet or two of bark on the cross-pieces making it more comfortable to lie upon. Pl. xi., fig. 2, represents one from the Lower Normanby River. To the right of the platform in the picture can be seen a "step" also formed of a forked limb pressed against the upright at an angle with the ground, while to the front will be detected the remains of a fire, the smoke from which keeps the sleepers free from mosquitoes; the fire is never built immediately beneath. Such a platform is built from five to six feet high, and may accommo-

date three or four people on top; local names KWA. bapgar, KLA. arrianggar, KRA. ngamba. To form the fourth stage this sleeping platform is enclosed with two more ridge-poles resting on correspondingly longer forked supports, which, when covered in with bark-sheet, constitute a habitation raised above the surface of the ground. The furthest north at which I have observed such a composite hut was on the Embley River; in the neighbourhood of the junction of the Palmer and Mitchell Rivers (Pl. xiii., fig. 2). Sub-Inspector Garraway tells me the platform is fixed at a height varying from six inches to three feet. On the Embley River the men use the platforms, the women having to be content with the ground, their business being to mind the fire

BULLETIN No. 17.

POSTURES AND ABNORMALITIES.

(Pls. xviii.-xxiv.; figs. 43-51.)

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1. *Sleep*.—Judging from my own experience I cannot say that any position assumed during sleep is customary, but from that of others whose opinions are worth considering, it would seem that the habitual posture of sleep is a coiled condition of the body resting upon its side (Pl. xviii., fig. 1), without the head being raised, at Cape Bedford and Cape Grafton, but with the head resting on a hand or arm at the Tully River and Princess Charlotte Bay. On the other hand, I have noticed that in the coiled position, it is the stomach and not the back which is invariably turned towards the fire. The natives are said to habitually sleep on the back with the head low on the Pennefather River, but with one or both hands supporting the head on the Bloomfield River. The Princess Charlotte Bay Blacks are also said to often lie on the stomach, or back, with the head supported by the hands. There is reported to be a very marked habit amongst the Cape Grafton children of swinging their heads and bodies from side to side, while in the sitting position, when lulling themselves to sleep.

2. *Standing*.—Amongst the males there is everywhere a common position assumed in standing at ease, viz., the placing of one foot just above the opposite knee (Pl. xviii., fig. 2), the balance

of the body being maintained by resting it against a tree, the arm upon a spear, the hand or thigh upon a wommera.

3. *Walking*.—In walking there would appear to be great variations in the degrees to which the feet are turned outwards. The palms are usually held to the side; amongst the Cape Bedford Tribe only two individuals were noticed to hold them to the front. The faster the gait, the greater the swing of the arms, unless of course one hand happens to be carrying the spears. They can all walk their twenty-five to thirty miles a day easily, if required.

4. *Sitting*.—In the neighbourhood of the Pennefather and Batavia Rivers, and elsewhere in the Peninsula, and often observable in the North West, the native, before sitting down, clears a circular space in which to squat. If on sandy soil, he will stand on one foot and brush aside with the other, in a more or less circular movement, any leaves or sticks that may be lying there; if on grass, he will bend down to pluck out the main tussocks. In the bush, in the Pennefather River area certainly, it is the business of the woman to clear this circular space (of grass, leaves, etc.), on which she and her husband will be camping for the night.

Men usually squat with more or less open thighs, and the shins doubled underneath (Pl. xix., figs. 1 and 3); but, as I have noticed both in the extreme west and east of the State, while one shin may be tucked under one thigh, the other may be lying upon the opposite one (Pl. xix., fig. 1). The illustrations shew the more common of the postures assumed by the males in the sitting position. With the women, the thighs are closed, and turned more or less laterally, with the shins tucked underneath, and feet projecting from one side. But ordinarily, so it seems to me, a female will sit with the legs closely apposed, and stretched straight out in front of her. When, however, a woman is in any strange camp, or in her own camp, with strangers present, she often sits with the thighs open, but with the one heel drawn well up into her fork as a screen.

5. *Swimming*.—The Lower Tully River Natives swim in a far more vertical position than do Europeans; furthermore, instead of breasting the water, the right shoulder appears to occupy the most advanced position. The right arm, starting with bent elbow, makes a clean sweep downwards, outwards and backwards until, at the end of the stroke, the elbow is fully extended. The left arm remains sharply bent throughout the

stroke and limits a far smaller circle, the elbow appearing above the water-surface at each stroke. The legs, not much separated, would seem to work "dog-fashion." If I could liken this manner of swimming to anything of ours, it would be something after the style of the ordinary side-stroke. When swimming any long distances, the Bloomfield River Blacks will go hand-over-hand fashion like a dog; otherwise, the body is tilted laterally, one arm doing the usual side-stroke, the other working pretty close to the body, and moving the fore-arm somewhat vertically. In diving any long distance, and to ensure rapidity of speed, the one arm, instead of doing the ordinary side-stroke will be strongly circumrotated vertically from behind forwards over the head. In all cases, the lower extremities are markedly brought into requisition. On the Pennefather River and at Cape Bedford, either the breast—or side-stroke, according to pace required is brought into requisition. The fact of a whole group of natives, though occupying the lands bordering a river, not being able to swim has already been drawn attention to¹.

6. *Tree-Climbing*.—The various methods adopted in climbing depend in very great measure upon the size, height and slope of the tree. Where the butt is comparatively small and vertical, the native will clutch it with the two feet on the same horizontal level, the knees being kept well out (Pl. xx., fig. 1); thus firmly planted, he drags his body up hand-over-hand fashion, and by a repetition of the movement rapidly advances. This sort of climbing is the *chati-balgin* of the Mallanpara occupying the Lower Tully River District, the second half of the word signifying the jumping-motion of a wallaby.

In the case of a long dependent vine, the black climbs it hand-over-hand (Pl. xxi., fig. 1), getting a purchase by grasping it between the first and second toes—*MA L. parpan*.

Where the size and slope of the butt admits, e.g., a cocoa-nut or other palm, the native will just walk up the tree (Pl. xx., fig. 2), throwing the weight of his body backwards, overbalancing being prevented by his clutching the tree firmly with his hands. *MA L. balngai-chanin*, where *balngai* signifies "to cross" in the sense of a log laid horizontally, and *chanin* means "to stand."

7. When the butt is too large, and the first limb not within reach, a very common practice is to place a forked stick at an angle up against the tree (Pl. xxi., fig. 4) and walk up it. At Cape Bedford such a forked sapling is called a *walbar*, the same

term as is applied to a log thrown across a stream for walking over it. On Mornington Island an interesting development of this method consisted of two such forks placed upon the butt in such a way as not only to interlock but also to support a horizontal piece (fig. 43); this forms a kind of platform upon which the islander can stand securely while cutting out a bees' nest, etc.

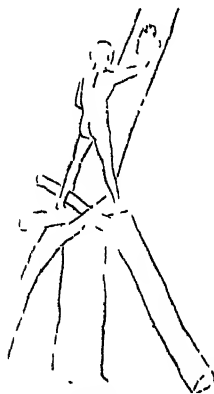


Fig. 43.

in use is always kept in the shade, and at one extremity is tied into a knot⁴.

(a) A more or less straight tree. The right hand holds the cane just in advance of the knot, the cane being then passed round the tree, tightened up with the left hand, and passed in a half-turn from under the wrist to over the elbow-groove and so to under the arm-pit (fig. 45). Slanting himself backwards (Pl. xviii, fig. 3), the native, with elbows a little out, gives a jerk as he raises the cane, simultaneously taking a step up; by repeating the movement, he thus gradually makes progress. The advance is always on the outer curve of the bend of the tree. Thus, supposing the tree is spirally curved, the course of the ascent is in a

Fig. 46.

⁴The local Mallanpara word bumaron is the verb indicating the ascent of a tree by this means.



Fig. 44.

A specimen in Dr. Roth's collection from Miriam Vale, where it is known as *yu-rol*, measures twenty-four feet in length; to the Tarumbal of Rockhampton it was known as a *bá-rin* or *ku-ti*.

³ Here on the Tully River, there is a half-moon cicatrix cut on the buttocks of men who are considered to be expert tree climbers (fig. 44). Such a half-moon scar (*MAL. kauren*), which may be supplemented with small horizontal cuts, is said to teach the owner how to climb properly.

spiral, and some boys can thus only climb such a more or less straight tree.

(b) The trunk branches into an acute fork. Should the tree-trunk after attaining a certain height, branch into an acute fork, the native will slack out more and more of the cane over the further limb while he advances correspondingly up the nearer one, until such time as he can step into the intervening wedge whence he can make a fresh start on either of the limbs more convenient.

(c) To free the hand holding the distal extremity of the cane, he accomplishes his purpose by passing the extremity of the cane behind his knee (Pl. xxi., fig. 2), which is very acutely bent, along the shin into the grasp of his first and second toes (fig. 46).

(d) To free the hand holding the proximal (knotted) extremity (Pl. xxi., fig. 3). Having completed the previous movement he passes his now free hand under the cane and reaches gradually along until he seizes the knotted extremity; as soon as he has a firm grip, the original one can be released.

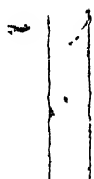


Fig. 46.

(e) To manœuvre an outstanding branch at a considerable height is only what a few expert climbers can do. It is mastered thus:—The hunter will carry up with him, by means of a loop around his fore-head or neck (fig. 47) a sort of "guide-rope," i.e., another length of much lighter cane (but about twice as long as the height of the outstanding branch from the ground) and advance as high up as the limb in question will admit. He then frees one hand, and passes the "guide-rope" over the branch to his friends below (fig. 48); as soon as it reaches them,

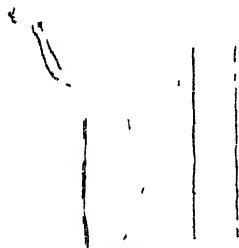


Fig. 47.

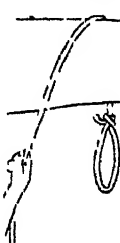


Fig. 48.

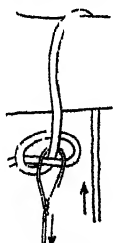


Fig. 49.

he lets go of it. His mates underneath now attach a much heavier cane to this guide-rope, and pull it up again (fig. 49). As soon as this latter one reaches him from over the branch, he

detaches it (the guide thus falling to the ground), makes a slip noose (fig. 50) in it with his free hand and teeth, and tightens it with a pull (fig. 51). He next takes a rest for a few minutes, comes down the tree, and when refreshed, reclimbs the hanging cane hand-over-hand fashion with the help of his toes; he is thus enabled to climb on to and over the branch, and then start afresh, if necessary, up the continuation of the trunk.



Fig. 50

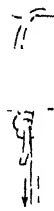


Fig. 51

This method of climbing a tree with a prepared cane I have seen used along the coast-line from Cape Grafton in the north to as far south as Miriam Vale, i.e., below Gladstone in the south. I have never come across anything like it however in the North Western Districts.

9. On the Bloomfield River and in the Peninsula, there are modifications of it as follows. Thus, in the former district, when the tree is of comparatively large size and somewhat bent, the black will take some handfuls of a species of "flag-grass," so common here, put tips to roots, make a few twists, and thus form a short rope—he puts this round the butt, catches hold of each extremity, and climbs upon the upper side with successive upward jerks of the arms which are kept in, and the elbows well back⁴. Any such method is nevertheless apparently unknown to the Cape Bedford Natives. In the Peninsula, e.g., at the Coen River and on the Pennefather River trees may be climbed with a bark strip of the "mess-mate" (*Eucalyptus tetradonta*), "match-box bean" (*Entada scandens*), etc., held at either extremity without any knot in it, and pressing on the tree-butt with the elbow-tips (Pl. xxii, fig. 1), and so jerking a way up; in the neighbourhood of Mapoon, this procedure is only resorted to in extreme cases, most of the timber being small enough to climb with hands and feet.

10. Tree-climbing by cutting steps alternately right and left is fairly common, met with even out on the Wellesley Islands. It has apparently been introduced on the Tully River of late years⁵ although practised at Cardwell only about thirty miles distant; the Tully Natives speak of it as chinda-balgin, chinda signifying any mark or cut, and balgin the jumping motion of a wallaby (Pl. xxii, fig. 2). Though I have used the word "steps"

⁴ From Mr. R. Hislop.

⁵ On the authority of Mr. E. Brooke.

these are but knicks, cut usually with one horizontal and one vertical blow by means of a metal tomahawk, just deep enough to afford adequate support for the big toe; where, as on Mornington Island, a celt of some sort has been used, the knicks must evidently have been hacked with many a blow. Though I have seen this method used on the Pennofather River it is somewhat rare there, but of course, as in all cases of tree-climbing, it is only when the butt does not lend itself to the body obtaining a firm foot-hold, that the tomahawk, the cane-climber, and the forked sapling are brought into requisition.

11. *Micturition and Defecation*.—From observations made at Capes Grafton and Bedford, on the Bloomfield and Lower Tully Rivers, at the McDonnell and Moreton Overland Telegraph Stations, and in the North-Western Districts, as to the position assumed by the sexes in micturition, I find that it is customary for the male to squat, except on the Bloomfield River, at the McDonnell and Moreton Stations, and for the female to stand with legs apart except at Cape Bedford and in the North West. On the Bloomfield River, the women may occasionally relieve the bladder in the squatting position. The privates are never handled. In the neighbourhood of Glenormiston⁶, outside the hut there has often been noticed a small mound of earth the top of which is scooped out and subsequently beaten down, with the resulting appearance of a volcano in miniature; this receptacle, which is capable of holding quite a quart of fluid, is intended for the women to micturate into. All over the State it is a common practice to wash the hands by urinating over them. A Tully River native to keep himself warm on a cold night, will often urinate over his own legs purposely.

In the Tully River District it is an invariable custom among both sexes, during defecation, to squat with legs apart on a broken bough, stick, or fallen log, always off the ground, on to which they let the droppings fall; both here and on the Bloomfield River a child's excrement is put away in the fork of a tree⁷. Stones, sticks, grass, sand, anything handy in fact, sometimes nothing at all, is used to cleanse the person with after defecation. On the Pennofather River, in the North West, and elsewhere, but certainly not everywhere, a few handfuls of earth are scratched up, and in the excavation so formed, the emunctories after being discharged are covered over with soil.

⁶ According to Mr. J. Coghlan, the late manager there, who is not sure whether this mound is used by the men. Possibly, the receptacle is employed with a view to the preservation of the urine, etc., for subsequent use—see Roth—Bull. 5—Sect. 158.

⁷ Roth—Bull. 5—Sect. 80.

12. *Menstruation*.⁸ In the Boulia and Cloncurry Districts, a woman during the menstrual period (PPT. *kimbaruro* 'blood possessor') keeps strictly to herself out of camp, and will not even walk along the same tracks as the men. On the Tully River she ties a bark blanket round her waist but takes no measures to prevent the discharge soiling her thighs; anything however that is soiled with what comes away from her is planted up in the fork of a tree⁹. She occupies the hut which the husband now vacates for another, though as often as not he will now camp in the open, on the further side of the fire. The males here are said to be frightened at touching women in this condition not only on account of the smell but also for fear of some of the discharge getting on to their persons. On the Bloomfield River she lives in camp under the same roof as her husband, but both here and in other localities where it is not customary for her to betake herself away, a fire separates husband and wife. On the Pennefather River, though remaining in camp, both she and her male partner take every precaution that he neither touches nor steps over anything that passes from her. Everywhere a woman in this condition is unclean and tabu, and may be even more carefully avoided than the mother-in-law; she generally cooks for herself at a separate fire whether living in the camp or out of it.

13. *Pregnancy and Labour*. - During the latter months of pregnancy, a North-West District woman will often rub over her breasts and body some warm powdered ashes with the idea of making the child healthy and strong. All through the period, no restrictions are imposed upon her, but in other districts, her eating certain dietaries will produce various deformities in the child¹⁰. In the neighbourhood of Cape Bedford the counting of pregnancy is certainly known. When the confinement is about to take place, the expectant mother invariably betakes herself to a secluded spot at some distance from the camp, and is attended on by her mother or mother's sister (Princess Charlotte Bay, Musgrove and Morehead Rivers), by her mother-in-law (Pennefather River), by an old woman friend, sometimes by no one at all. Alone, in one district (the Upper Georgina), the husband though not in attendance, may be present at the confinement; very old men are similarly privileged in the Leichhardt-Selwyn area, but never young men or boys.

⁸ Roth—Bull. 5—Sects. 89, 90.

⁹ Compare the disposal of a child's excrement (Roth—Bull. 5—Sect. 80.)

¹⁰ Roth—Bull. 5—Sect. 95.

15. The position assumed during labour is far from constant. In the hinterland of Princess Charlotte Bay, the woman will either lie on her back with her head raised, or more generally, bend forwards and support herself on her hands and knees; only if very strong will she take up a sitting position, squatting more or less on her heels. A Bloomfield River Native will assume a kneeling position, her hands and arms supported on a friend's shoulders sitting in front. On the Tully and on the Pennefather Rivers, areas extremely remote, confinement takes place in the squatting position, with thighs well apart, the body resting on the extended arms behind; in the former district, the sufferer may be assisted by a woman friend either bending over her from behind and pressing, with her hands at the sides, downwards, forwards, and inwards, or at the front with her arms around the patient's loins pressing them towards herself. In the case of the Pennefather woman, she will stay away from camp with her mother-in-law, for three or four weeks. Among the Yaro-inga of the Upper Georgina River, the woman lies on the ground upon her back, with open thighs and drawn-up knees, while the old gin appointed to attend holds her down by the neck and head to prevent her raising herself. The husband, if he be so minded, can take up a position on his wife's left and front whence, a few paces off, he can witness the whole of the proceedings. Amongst the Kalkadun (at Quamby) the patient does not return until about eight or ten days after baby is born. A very old man or two may be present during delivery. Having made a fairly shallow excavation in the sandy soil, she sits over this on her shins and knees, with the thighs well apart; as labour progresses, she either throws her body strongly backwards, as on the Tully and Pennefather Rivers, or forwards so as to rest her hands on the ground, or, if conveniently situated, may grasp some overhanging branch of a tree. In the intervals between the pains a thick cord may be tied pretty firmly round her waist to assist in "pushing the child out," while another old woman will take up mouthfuls of water from a vessel and spit them over the distended abdomen, upon which a sort of massage may also be performed. The genital passages are never touched by anyone, and the baby, without any guidance, is allowed to fall into the shallow depression below.

14. The navel string, before the mother shifts her position, is next held, close to its attachment to the child, between the flats of both hands of one of the old gins, and briskly rolled backwards and forwards until a very marked twist is visible, when it is cut to a length of about five or six inches. Similarly the after-birth is allowed to fall into the cavity where it is either

buried, or more generally destroyed by fire. In other districts, the cord is both tied and cut—tied with Opossum-twine (in the North-West), cane-strip (Lower Tully River), and hacked asunder with stone or shell. Its ultimate fate is either to be buried with the after-birth (Tully River), to be destroyed by fire (Bloomfield River), to decorate the infant, to be presented to certain relatives, or to tabu certain articles in the neighbourhood of which it may be placed. Around Princess Charlotte Bay the only area where I find it customary to tie the cord (KRA. bo-ra) in two places, it is forcibly pulled away from the after-birth (KRA. nai-úra) and fixed around the infant's waist. On the Bloomfield River it is similarly dragged off so as to obtain the greatest continuous length possible, and left for quite twelve days or a fortnight hanging round the baby's neck, or coiled around its neck and arm-pit: if at the end of this time it has not rotted away from off the infant, it is removed and burnt close by. At Cape Bedford, the cord¹¹ is tied up in a coil and hung on a string round the child's neck, where it is worn for some time, it being finally presented to the father's father if a boy, to the mother's father, if a girl; should either of these old men place it upon a heap of yams, etc., this would be rendered tabu from everybody else except the other grandfathers. In the Upper Georgina area, the navel-string is wound into a ball or roll and forwarded by messenger, at the instance of the father, to his relatives and friends in the neighbouring camps whence presents will now come pouring in. At Cape Grafton the navel-string may be sent round with similar objects in view by tying pieces of it in a waist-circlet. On the Pennefather River the placenta, which is buried at birth, is credited with being connected with the vital principle¹². Here, when the portion of cord finally falls off baby, it is covered with beeswax, wrapped around with bark, and carried in the mother's dilly-bag; she does not bury it until such time as the little one begins to toddle, because were she to muke away with it previously, the infant would surely die.

Confinements are easily got over; I remember in particular the case of a woman who walking from Cooktown to Cape Bedford, a distance of twenty-five miles, was confined the same day, and then started the following morning for Cape Flattery¹³.

¹¹ The local name for the placenta is bonor, *i.e.*, a slug.

¹² Roth—Bull. 5—Sect. 68.

¹³ Amongst the Brisbane natives, immediately the placenta had come away, the mother would go into the water, provided the confinement took place in the day-time; if at night, she would wait until the following morning (*T. Petrie*).

15. *Notes on Abnormalities.*—Baldness in old people is the exception; out of four hundred and ten natives met with in the neighbourhood of Princess Charlotte Bay, only two old men were thus characterised. Curliness of hair is particularly marked amongst the Tully River Scrub-Blacks as compared with the coastal ones who have it more waved. A more or less wavy condition is prevalent throughout the North Western Districts. The only case of erythrisism known to me on the Bloomfield River was that of a little boy; indeed, only three other instances, and those amongst the Tully Natives, were come across during all my travels in Northern Queensland. They were Narro, a lad about eight or nine years, in the local camp on Brooke's Selection, Kachula now (Aug. 1900) on the Johnstone River, as well as his two full-blooded children, a boy and a girl. Red-hair is looked upon by these Mallanpara Blacks as a disgrace, and ridiculed when noticed in Europeans; the local belief is that a person so adorned has a hot temper. In the far North Western Districts, I have noticed a fine growth of hair, over the entire body, including the buttocks, especially amongst the women. A peculiarity of want of pigmentation in the hands and feet (Pl. xxiii., fig. 1) has been seen in two cases from Princess Charlotte Bay. One example of simple hare-lip, was observed in a male on the Embley River, and one single example of goitre (? malignant) in a Kalkadun woman at Cloncurry (Pl. xxiii., fig. 2). Left-handedness is fairly common. In one case at Cape Bedford, where not existent in the parents, the four sons are all left handed. Congenital club-foot is not rare; amongst four hundred and ten natives around Princess Charlotte Bay, there were three cases noticed; one of these was of the left, another of the right, and one of both feet. An allied deformity was seen in two old men in the neighbourhood of Barrow Point, and in Palmer the old chief of the Wakka people at Gladstone. In all three cases the soles could rest perfectly flat as on the gun-case in Pl. xxiv., fig. 1, the malformation evidently residing only in the metatarsus and phalanges. The two old Barrow Point folk were brothers, the younger being deformed only in the left foot, similarly to what both parents are stated to have been. A kind of hammer-toe is very prevalent, more in the females than males, around Cape Grafton and the Mulgrave River District generally. At Cape Grafton the fourth toes of both feet are affected (Pl. xxiv., fig. 2), on the Tully River the third (Pl. xxiv., fig. 3) and fourth (Pl. xxiv., fig. 4), in both areas the peculiarity appearing to run in families. The names of the individuals underlined in the following genealogical trees, indicate those who bear (1902) the deformity:—

Cape Gratten | (a)

Billy Church his wife

Nora

Maggie 1st

Maggie 2nd

Alec Bibby

5 children

Albert

,, | b)

Eddie's Husband

Eddie

Nelly

Rosie

Tommy

Namo

Rosie

Toby

,, | (c) Katie ; not in her parents. She has no brothers or sisters.

Mulgrave River | (d)

Father Mother

boy

Lucy

Stella

Four-mile Cairns | (e)

Father Mother

Martha

Topsy

Maudie

,, | (f) David ; but only on one foot ; neither in brothers sisters, nor parents.

Saltwater Creek
(Cairns)

| (g) Annie Bergmann ; both feet, but neither in brothers, sisters, nor parents

BULLETIN No. 18.

SOCIAL AND INDIVIDUAL NOMENCLATURE.

(Plates xxv.-xxxi.)

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1. The many variations in the physical characteristics and general contour of the country are not only recognised but expressed, amongst the generic terms thus met with being those indicative of island, sea, beach, mainland, river, swamp, forest, desert plain, precipice, mountain, etc¹. Each tract of country is specialised by the people traversing, occupying, or hunting over it, and hence, as often happens, may be called by different names. Barrow Point, for instance, is known to the local blacks as Epolin, to the Starcke River ones as Mo-yir, and to the natives of the Normanby and Deighton Rivers as Par-cham-moka. On the other hand, there are certain large tracts to which a single name is applied, but in these cases any reference to them is made by Aborigines speaking a similar language. The meaning of the actual words so applied to such an area is in many cases lost, whilst in others it is significatory of some local peculiarity. Amongst the former may be mentioned an interesting example from a camping ground in the neighbourhood of Cape Flattery known as Yaborego, from which a present-day

¹ Roth—Bull. 2—Sect. 10.

family name at Cape Bedford is derived, apparently identical with that of Yaparico given in Captain Cook's narrative² as that of an individual with whom the "Endeavour" crew came into personal contact. Amongst the latter, we have similes drawn from shape, soil, vegetable or animal life'. Tamal-nobun (=foot-one) is applied to a mountain in the neighbourhood of Cape Bedford which rises sheer vertically from the surrounding plain. Katu (=end, extremity) is Stanage Point, Broadsound, whilst Wollo-in (=iguana's tail) is one of the western spurs in the neighbouring Normanby Range. Dogar (- sand) expresses the country at the base of Mount Saunders, Endeavour River, between it and the sea, and Wargain (clean sand) the stretch of coast-line between Port Clinton and Shoalwater Bay. Bipu (=any large creek) is the area south of the Fitzroy River between Yaamba and Craignaght. Warra (wild guava), Butcha (=honey-suckle), Bitchal (=small grub) and Riste (=sand-fly) denote respectively Gracemere, Bayfield, Yaamba, and Raspberry Creek country, and are all indicative of the local phenomena prominently met with (*W. H. Flowers*). The limits of the different tracts of country are of course invariably natural:—a mountain range, desert, plain, forest, scrub, coast-line, or river. Rivers are named after the tracts of country through which they run, any large-sized stream thus bearing dozens of names in its course. The Munbarra Gold-Field was so named after the word Munbar, the mountain range east of the Starcke River, the country on either side of the stream here being Dun-jo, the river itself being accordingly called Piri-dunjo. So again, the McIvor River, at its mouth, is Piri-kulal, at Wallace's Selection Piri-bindi, and at its junction with Ocooa Creek Piri-wundal. The same holds good at Princess Charlotte Bay, where the Koko-warra term for a river is tai-ir, whence a portion of the Lower Normanby River at the crossing is known as Tai-ir-karwin. In some cases, owing to the close proximity of two streams, identical terms are applied; thus the Koko-warra-speaking people call both Marrett River and Birthday Creek Tai-ir-arú-o. A similar practice of naming rivers is found on the Gulf-coast, between the Nassau and Staaten Rivers, and in the far western areas. At every chief encampment, nay, at every recognised camping-ground, there is a name for every landmark, or whatever else can possibly be used as such in the vicinity; each sandhill, water-hole, river-bend, stony ridge, gully, pathway, bigger or peculiarly shaped tree, indeed any-

² Hawkesworth's Edition, London, 1773.

³ Mr. T. Petrie gives several examples in his native place-names.

thing and everything out of the ordinary has a special name applied to it. At Roxburgh Downs I have seen a fairly sized water-hole, the different edges, etc., of which were described under at least seven different names. Upon the occasion of my once asking a native why every little nook and cranny in the neighbourhood of his camp had a special name, he turned the tables on me by enquiring why all the streets of a township were differently termed:—"Street along town all same bush along my country!" In the far western districts, and other areas comparatively subject to drought, the importance of water both in the neighbourhood of camp and along the different lines of travel will explain in some measure how it happens that, except in the case of some otherwise strongly-marked physical peculiarity, *e.g.*, a mountain, most of the geographical location is indicated by words denoting creeks, rivers, water-holes, lakes or springs. And it thus comes to pass that many a name of a head-station, township, etc., of the white settlers which has been built on a site selected for exactly similar reasons, has its aboriginal equivalent in the name of its adjacent water-hole, etc⁴.

2. Any group of natives living more or less permanently together may be specialised according to the tract of country where they have first claim on the native foods; in other words, they may be, and are, spoken of according to the place-name of their main encampment, their "home" so to speak. Thus we have—

At Cooktown, the Kai-ar-ara, *i.e.*, natives occupying the country round Kai-ar (Mt Cook).

On the Bloomfield River, Yalmba-ara, *i.e.*, natives occupying the country round Yalmba (between Wyalla Station and sea-coast).

At Bowen Bay, Arwur-angkana, *i.e.*, natives occupying the country round Arwur (Bowen Bay).

At Cape Melville, Yalnga-bara, Yalnga (C. Melville).

On the Normanby River, Karwin-inna, *i.e.*, natives occupying the country round Karwin (Lower Normanby).

At Duyphen Point, Taini-kudi, Taini (mangroves).

On the Batavia River, Denya-kudi, Denya (bush-country).

In Broadsound District, Riste-burra, *i.e.*, natives occupying the country round Riste, (country around Raspberry Creek).

This "home," after which the group of natives occupying it happens to be called may or may not be the birth-place of the

⁴ Roth—Ethnol. Studies, etc., 1897—Sect. 226.

occupants, for, according to the district, a child has claims on its father's or on its mother's (Bloomfield) country, and sometimes on neither (Pennefather River)⁵. In many cases, as in the far Western Districts, owing to forced migrations on account of scarcity of water, advancing European settlement and other causes, the place-name of the home has been preserved, but its exact geographical identification lost⁶, while on the Wellesley Islands, and here and there in the Peninsula, natives are to be found amongst whom no necessity has apparently arisen for having a collective or specialised name at all.

3. As a general rule, however, within certain limits, each group has more or less friendly, commercial, or other interests with some one or other of its neighbours; its members, though speaking different dialects may render themselves pretty mutually intelligible and possess in common various trade-routes, markets, hunting-grounds, customs, manners and beliefs with the result that they might as a whole be well described as messmates, the one group sometimes speaking of another by a term corresponding with that of friend. There may, or may not (*e.g.*, Boulia District) be one single term applied to such a collection of friendly groups, *i.e.*, a tribe occupying a district, the meaning of the collective name being either unknown (*e.g.*, Kalkadun, Workai-a), or bearing reference to the physical conformation of the country, or else depending apparently upon the nature of the language spoken. So far as physical conformation is concerned, the collective name indicates groups of people occupying forest (*e.g.*, Martchi-tchi of the Bloomfield River), scrub or bush country (*e.g.*, Barti-tchi of the Bloomfield River), low-lying plains (*e.g.*, Ku-inmur-burra of Broadsound District), mountains, coast-line, etc. As far as I have been able to judge, it is these variations of site which have a great deal to do, nay, which I might also say, have given rise to distinctive ethnographical differences; generally speaking, there is always enmity between occupants of the coast-line and inland tribes, between the inhabitants of the plains and the mountain people. The collective name dependent upon the language or dialect spoken by the separate groups may bear reference to peculiarities or differences of speech. In the following examples for instance on the North-east Coastline and its hinterland, this is very striking. Koko-yimi-dir, and Koko-yerla (n)⁷-tchi which has become corrupted into Koko-yellanji, are two words, each in their own dialect,

⁵ Roth—Bull. 5—Sect. 68.

⁶ As in certain of the groups in the Boulia District.

⁷ The n is euphonic.

indicating "speech-similar-with," applied to and by the natives around the Endeavour River, and over Butcher's Hill country respectively. Koko-baldja signifies "speech-abrupt," descriptive of the blacks of the mouth of the Bloomfield River, the Mission Reserve, and Connemara Selection. Koko-piddaji or "speech-poor devil!", a term employed in the sense of pity and compassion, in reference to the Aborigines who speak it being in their time the weakest and most imposed upon; they used to occupy King's Plain country, the Tableland, and Mount Amos, but are almost extinct now. The Ko-ko-minni or "speech-good people" have their home around the Middle Palmer River. The Koko-warra, *i.e.*, "speech-bad, crooked," etc., in the sense of not being intelligible to others, and so "foreign" is applied by themselves as well as by their more southern neighbours to various mutually-friendly groups of natives wandering over the hinterland south and east of Princess Charlotte Bay, speaking within certain limits similar dialects and practising similar usages and customs; I say certain limits advisedly because although for instance the Kennedy River boys speak very differently from those on the Jack River, they are yet mutually intelligible. It is indeed curious to find a few hundreds of these people collectively speaking of themselves and their mess-mates as Koko-warra without apparently having any idea as to the meaning of the term. Another example is Koko-nego-di, or "speech-there-with," a term applied by the Cape Bedford Blacks to the people (and language) along the coast-line from Barrow Point to Cape Melville. On the other hand, in very many cases, the name of the language has nothing whatever to do with the people speaking it. Indeed, it may be absent altogether, there being no occasion for its use, it may have a now unknown meaning, it may be compounded from the first person pronoun (*e.g.*, the *teana-ngada* and *marma-ngati* dialects of the Mission River, Albatross Bay), and it may be indicated by its place of origin—thus, Yuro-Kappa, Kia-Kappa, and Yilbar-Kappa denote the Bowen, Proserpine, and Charters Towers languages respectively, while Koko-rarmul, and Koko-lama-lama describes what is spoken on portions of the Morehead River and Princess Charlotte Bay. Similarly in the Cairns District, the Kungganji, Yirkanji, and Yidinji speak kunggai, yirkai, and yidi respectively.

4. In the following notes dealing with Ethnographical Districts I propose referring only to those few where, during the past thirteen years I have lived with the natives on terms of fairly personal intimacy, and then but to place on record the

more important of the separate groups³ comprising them, the trade routes followed, and some of the more important place-names. The Boulia and neighbouring districts have already been threshed out in a previous work, while the more important of the remaining details of the other areas have been discussed according to their subject matter in my different Bulletins.

5. The Rockhampton and Central Coast-District. My first introduction to the Rockhampton Aborigines was through "Yorkie," whom I met early in June 1897⁴ at Holly Hill where he was taking a contract for clearing timber. He is an aged adult and ex-trucker, and while in the Police Department visited Normanton, Cloncurry, the Upper Leichhardt River, etc., and hence was able to identify the social class-systems of his own group or tribe, the Tarumbal, with those discoverable in the North-Western areas of the State. Like all the remnants of his people, his own wife being a rare exception, he is addicted to the opium-habit. He speaks English very well and is locally known as a curiosity in that he often comes in among the settlers to borrow a sixpence, and invariably repays it! Yorkie travels now between Rockhampton and Gladstone, occasionally going a bit further south towards Miriam Vale. His family, which accompanies him, consists of a wife (Tuomi), a son (Mari), a pure-blood son-in-law and daughter with pure-blood grandson about fifteen months old, and a half-caste daughter about nineteen years of age; his own individual name is Tu-wal-wal.

Of the original Rockhampton tribe, the Tarumbal, not many remain now. At the North Rockhampton Camp, the one near the pound-yard, there were about seven or eight adults, of whom three were females, and two or three children. At the other, on the Yaamba Road where Moore's Creek crosses it, I found four males, two females, all aged and a young boy. At South Rockhampton in the Dépôt Hill Camp, I came across over a

³ These groups, etc., have been referred to throughout the various Bulletins by their initial letters bracketed.

⁴ The notes on this district were originally written in July, 1898, I having been in continuous correspondence during the twelve months' interval with many of the "old hands" who supplied me with much important information which, at the actual time of my journey, I was unable to obtain. Among such gentlemen, two at least of whom are deceased, I gratefully mention the names of Mr. W. H. Flowers, of Medway, Bogan-tungan (who was on Torilla and Pine Mountain Stations from 1867-91); Mr. W. T. Wyndham, of Boyne Island (the first European occupant of Keppel Island in 1884); Mr. C. E. Roe, of Miriam Vale (thirty years' resident in the district); and Mr. A. Cowie (upwards of twenty years in Rockhampton).

dozen younger adults of both sexes ; these latter occupy their time in collecting ferns, manufacturing "weapons" for the local European market, and selling their women to their white, Chinese, or Kanaka camp-visitors. Among them was a surly looking woman, a Maikulan from the Upper Leichhardt River who had been brought down here by the police, as a tracker's wife, but as usual never sent home again. The present-day real old medicine-man of this Tarumbal Tribe is one "Buckley" who, with a couple of younger women, resides permanently at Balnagowan Station ; he has the reputation of knowing everything, all the legends about animals and birds, about death and ghosts, etc., but unfortunately he is too old and decrepid to render himself sufficiently intelligible. I met with some settled remnants of this same tribe again at Mount Morgan, whereas at Emu Park which comprises country certainly belonging to them, I saw none at all, though I was informed that "Old Pluto," a locally-born black is occasionally to be found there. The head-centre or "home" camp of the various groups comprising the Tarumbal tribe used to be in the neighbourhood of the site now occupied by Paterson's slaughter-yard, about one and a quarter miles from Rockhampton in the eastern angle of the triangle formed by the main road, Alligator Creek, and the main drain, this block of country being known as Randol. Large numbers of them have been buried between the yard and the creek and up along it, on the township side, whence, in times gone by, their bones were subsequently removed to hollow trees. In close proximity to this camp used to be their permanent initiation ceremony (Bora) ground, called Kang-kal. They occupied country on both sides of the Fitzroy River which they crossed in canoes. On the northern side of the river they travelled to Broadmount, Balnagowan, and to Emu Park where they would exchange courtesies with the blacks from the northern-coast-line and islands, as well as with those from Yaamba, Mt. Hedlow, etc. South of the river, they would go, for fighting purposes only, along the present Rockhampton-Gladstone road as far as the site of the present "12-Mile Stock-yard," i.e., the water-holes about two and a half miles north of Raglan Post and Telegraph Office. Starting on this route from Rockhampton they passed Archer's Cattle-station at the 15-Mile, the 6-Mile Creek (Ri-umba) close to Cross's Hotel at Bajool, the water-hole (Rular-villam), the name of which "Yorkie" says gave the white settlers their present township name of Ulan) at the same hostelry, the 1-Mile Creek (Kindor) beyond the hotel, the stony ridges (Káraní) three miles further on, the succeeding six or seven miles of dense scrub (Kútalmal) until they reached the

water-holes (Pa-rul) close by the 12-Mile (from Raglan Head-station) Stockyard already referred to; Mount Larcombe they saw in the distance. Raglan country was at one time occupied by Rûn-burra and Rûrkavara (groups perhaps of the Urumbal) all dead now; together with the blacks from Gladstone, from Miriam Vale, and even (the Yungkono) from Bundaberg they used to meet the Tarumbal in battle here at Parul. Mr. McDonald of Holly Hill tells me that twenty years ago he has seen as many as a couple of hundred natives congregating here just for a fight. Occasionally, the Tarumbal would pay a visit to Gracemere and Westwood, and in very early times were known to have travelled up to Mount Morgan.

6. Gracemere, in the olden days, formed the home of the Warra-burra Group (of the Tarumbal); their peregrinations included Calliungal, Mt. Morgan, Westwood, Rosewood, Rockhampton, Emu Park and Gladstone, than which they never travelled further south; there are no blacks at the station now.

At Mount Morgan, I visited the blacks' camp situate some two and a half miles from the township on the banks of the Dee River. There are a dozen adult natives here of whom eight are women, half of these aged, and several children, the former living in fairly comfortable circumstances with their Chinese and Malay partners. They have their meals at fixed hours, pass an existence far less debased than their sable brethren at Rockhampton, and at the time of my visit had up the clothes' line on which the children's garments, nicely washed and mended, were drying. These blacks, are of Rockhampton and Gracemere parentage, the original local Wollea-burra, whose "walk-about" extended out towards the Prairie and Bauana way, having all been exterminated.

Rosewood was the home of another Tarumbal Group, the Karun-burra, whose peregrinations included Morinish, Yaamba, Rockhampton, Westwood, and the Dawson River as far as Duaringa. At the present day, when visiting Rockhampton—there are still a few surviving—they camp on the south side in the scrub at the base of the Hospital Hill.

Another of the Tarumbal groups, the Raki-wurra, have their home at Yeppoon, where there are just about a score left. In the old days, they used to visit and be visited by the Keppel Islanders, and would also travel coast-wise to Woodlands, Byfield, Maryvale, up along the Peninsula and back again; at the present time, they occasionally journey to Emu Park and to Rockhampton. Long ago, Yeppoon used to be a meeting place of the Torilla, Rockhampton, Yaamba, and Mt. Hedlow natives.

In connection with the Mt. Hedlow ones it is of interest to note that the last survivor, "Old Charlie" was buried 30th June 1897, a few weeks before my visit, at a spot about twenty yards from Mr. Bosomworth's on the Greenlake road (*i.e.*, the branch-off from Wyatt's on the main Rockhampton-Yeppon road).

7. At Yaamba (Pl. xxv., fig. 1) is a small camp consisting in the main of old and diseased individuals, of mixed origin, though the Bichalburra Group of the Warrabal Tribe constitute the local one; none of them however could speak or understand English sufficiently well to allow of my collecting a reliable vocabulary. On the Yaamba-Marlborough road in Smith's Paddock at the 4-Mile Creek (*i.e.*, four miles south of Princhester) is a camp of three old males and one aged female, remnants of the Mu-in-burra Group of the Ku in-murr-burra Tribe. This tribe owned the coast-country comprising Torilla, Banksia, Tilpal, Raspberry Creek and Pine Mountain; Torilla was the main camp or home whence the blacks would travel down the coast to Emu Park, and inland to Yaamba and Rockhampton. At Marlborough I met some Bauwi-wurra natives, some eighteen or twenty of whom are still living. Their chief camp is at Apis Creek, the other side of the range, their "walk-about" including Marlborough, Stoodleigh, Princhester, Leura, Waverley, Willanji, Tooloombah, and Broadsound, *i.e.*, St. Lawrence where they exchange courtesies with the visiting Mackay Blacks, a fact which accounted for my coming across two Mackay-made boomerangs in the Marlborough camp.

8. Turning attention now to the southern portions of this Rockhampton (Pl. xxvi) and Central Coast-District there are the Gladstone and Miriam Vale, as well as the Island Blacks to consider. At Gladstone, I visited the native camp situate at Police Creek about three miles from town; it was stocked with fowls, cats, and dogs. The several bark huts were pretty substantially built, giving shelter to twelve or fourteen occupants, mostly old men and women. Some of these blacks work during the day either in the township at house-work, or on the shore at fishing, and together with various odd jobs, manage to get along fairly comfortably; everything however in the way of money is sacrificed for opium. They are of very mixed origin being representatives of Duppil (from Barney Point), Koreng-Koreng (Miriam Vale), Wakka (Gladstone, Calliope), Yungkono (Bundaberg) and other tribes. As a remnant of the Wakka, there was "Palmer" (who long ago was in the employ of Mr. C. Hedley at Boyne Island) a well-known Gladstone identity; he is an old ex-tracker, very

infirm mentally and physically with narcotics and senility, though managing to crawl into town and out again in spite of a deformity of both feet (double talipes equino-varus). The head-camp of these Wakka, of whom only two or three are said to survive in the district, used to be on the present site of Gladstone whence they would travel southwards as far as Bundaberg, and westwards to a distance which I was unable to locate. In former days the home of the Duppil—of whom only four now remain locally—was situate some three miles south of Gladstone at Barney Point, known as Dolowa, whence the name of the main Gladstone thoroughfare has evidently been applied.

9. At Miriam Vale I came across the comparatively large permanent camp of the Koreng-Koreng with about twenty-five to thirty adults, and the majority of them drunk. They travel northwards as far as Gladstone, southwards to Bundaberg, and westwards out to Cania Station and the diggings. Mr. C. E. Roe has known them travel as far inland as the Bunya Ranges (Rosalie, etc.), but does not think they ever went very far north or south beyond the limits just stated; he has seen a camp with visitors—a total of six or seven hundred—congregated at Miriam Vale and stretching over a length of three miles, though they were perforce to keep shifting owing to the food-supply.

10. Two excursions to the Keppel Islands gave very interesting results. On Big Keppel where the nineteen remnants of the islanders are now congregated, there are sixteen full-blood adults, two half-caste children, and a full-blood six-month old (October 1898) female infant; among the adults only three are males, the overwhelming preponderance of women being easily explicable when the character of some of the previous European visitors to the island is borne in mind. On North Keppel is still to be seen the actual camping ground where at least seven males were shot down one night in cold blood, the father of one of the surviving women (who described to me the scene as it actually took place) being butchered while his little girl was clinging round his neck. Other males were deported and decoyed to the mainland, by false promises of food, etc.; some of them (including Yulowa) succeeding in swimming back the distance of between six and seven miles whilst others were shark-eaten. Mr. Wyndham, the first white occupant of Big Keppel, in 1884, tells me that there were then about fifty-four individuals there; he was just and kind to them. The manner in which he first entered into communication with them is interesting:—in his own words—"At first when I was there the blacks used to keep away from me and the two mainland natives who accompanied

me, till we managed to surprise and catch eight or more of the tribe that inhabited the south end of the island. Mr. Ross was there at the time but he could not get them to communicate with him; he offered them tea and bread, but they only smelt it and would not taste. Then I told him I would try my hand, and I sat down opposite to them in the same way I had learned and seen years before on the McIntyre River, and smoothed the ground next me with my hand, when "Old Yulowa" who was evidently the head-man, or doctor, of the tribe, got up and sat down by me at once. I then took some sugar and mixed it with water, broke a little bread in it, and let him see me eat it, and he tasted it; he then called out to the other blacks that it was the honey of the *Banksia* (the blossoms of which they used to steep in water and drink), and they all ate. After this, whenever I saw them, they used to come up to me . . . in time, they used to fetch fish." The name of Yulowa was given the boy by Wyndham after that of a bay on the island facing Emu Park; he is an old man now, but has a son, "Paddy," and the little female grandchild left him. Wyndham says that, in his day, Big Keppel was inhabited by two "tribes," the one on the south extremity speaking Tarumbal dialect, the other, on the north, a Broadsound one. A peculiarity amongst them is their rapidity of utterance, a fact of which I had been previously informed by the Rockhampton and Yeppoon natives, the latter on this account speaking of them as "crows."

11. Thanks to the kindness of Mr. W. H. Flowers who supplied me with a copy of a map of the district which he drew up in 1881, it is possible to indicate approximately (Pl. xxvi.) the boundaries of the main tribes, some half dozen or so, which in those days roamed the country. These main tribes were formed of various groups, of greater or less number, named as a rule after some physical peculiarity of that particular spot of country which the individual members regarded as their home. One or two of the main tribes have disappeared in their entirety, though several of the groups, as already mentioned, I was fortunate enough to meet with. In the following list Mr. Flowers has given me a translation of the different group-names; the suffix—burra denotes of, or belonging to. The reference numbers are marked on the Sketch-map in circles.

Ku-in-murr-burra Tribe [Ku-in-murr=a plain]	{	1. Katu-burra	end, finish
		2. wandu-	" mountain
		3. wollo-in-	" iguana tail
		4. warra-	" "damper" of zamia nut
		5. mu-in-	" ashes
		6. pankan-	" gap in a range
		7. riste-	" sand-fly

Ningebal Tribe	{	8. war-gain-	„	clean sand
		9. randu	„	Townshend Island
		10. taru-	„	fig that is fly-blown
		11. kuki-	„	green-headed ant
Tarumbal Tribe	{	12. bu-cha-	„	<i>Banksia</i> tree
		13. warra-	„	wild guava
		14. konku-	„	sickness, retching
		15. barri-	„	flame caused by fat when cooking
Warrabal Tribe	{	16. woppa-	„	island
		17. karun-	„	flesh
		18. bi-chal-	„	small grub
		19. bi-pu-	„	big river
Tarrambarra Tribe	{	20. wolle-a-	„	.....
		21. hanbara-	„	open country

The following are some of the Rockhampton District native names collected during my itinerary, exclusive of those which are embodied in the text :—

Apis Creek	kanya-nályana
Archer's Cattle Station at the 15-mile R'ton	wanno-wállim
Balnagowan	ruval-uval
Banksia	tirpara
Broadmount (the hill itself)	baltaran
Calliope	dirralli
Calliungal	nu-rer
Cania	ha
Canoonu	wang-in
Duaringa	tarwo-dúninji
Emu Park	wu-pal
Gladstone	kardabai
Gracemere	bá-dul
Keppel Islands :—	
Big Keppel	woppa
North Island	kanómi
Middle Island	ballábbá
Myall Island	mammalónbi
Humpy Island	burr-yi burr-yi
Barren Island	arámmi
Corrobboree Mountain	terrimál
Outer Rock	ó-nan
Man and Wife Island	bangka-bulari ¹⁰

¹⁰ lit=rock-two.

Leura	yawalgárra
Marlborough	wando-wangain
Miriam Vale	ku-rung-gan
Morinish	mundu
Mt. Hedlow	karvara
Mt. Larcombe	paryelli
Mt. Morgan	kunu-wámballi
Pine Mountain	kun-yan
Princhester	má-run
Raspberry Creek	nárbuni
Rockhampton near Alligator Creek	kap-pái-i
Rosewood	malkuru
St. Lawrence	banbára
Tilpal	kú-rumi
Toooloombah	bún-bil
Torilla { Station	wolla
{ neighbouring hill	wandu-borru
Waverley	kamupalkái-o
Westwood	kápparin
Willangi	kur-gáro
Yaamba	{ yimárpo
	{ yimar-ipo
Yeppoon	i-pun.

12. The Cairns and Atherton District (Pl. xxviii., fig. 1). The sketch-map of the neighbourhood of Cairns (Pl. xxvii.) shews the distribution of the three main tribes as they were in August, 1898, but what with the progress of the mission work at Yarrabah on the further side of False Cape, and the increase of area under settlement on the Cairns side, the arrangement may not possibly hold good at the present day. The following are a few of the native place-names:—

False Cape	kai-ka	Saltwater Creek	baddabadú
Cape Grafton	jilliburri	Palmer Point	mun-ju
Murray Prior Range	jur-bo	Pyramid Mountain	jaro-járo-kan
Fitzroy Island	kar-par	Cairns (site)	ka-mói
High Island	wannaga	Barrier Reef	yur-pin.

13. At Atherton, the natives to be met with, as well as in the neighbourhood, belong to three groups or tribes speaking different dialects—the Chirpal-ji, Ngai-kungo-i, and Ngachan-ji who speak chirpal, ngaikungo, and ngachan respectively. The Chirpalji have their main camp in the vicinity of Carrington at Scrubby Creek (Ku-róngul), travelling to Atherton (Kár-kar) and

the Herberton Ranges (Urang-ündi). The Nguikungo-i with their home at Atherton go on the "walk-about" to Watsonville (Ilánbare) passing on the way the heads of the Walsh River, country which they speak of as Balkin. The remaining group have their main camp (in 1898) at Putt's Selection, two miles above the Cairns-crossing, on the Upper Barron River (Takkará-il country), whence they wander to the head of the Upper Russell River (Ku-par country). The Tinaroo Ranges are spoken of locally as Mún-gija.

14. The Bloomfield River District¹¹. Banna-billa (occasionally corrupted by the local settlers into Banana Billy) is the country at the mouth of the Bloomfield River, the native name designating the selection (Osmundsen's). The group here (Bannabillára) includes some three or four remnants from Bailey's Creek (Gangaji) about four miles south, and perhaps the same number from Tchul-gur, the present Toolgoor Selection of Cochrane's some little distance north of the Bloomfield River. These blacks are the best workers, the most civilised, the best turtle-fishers, and yet the weakest throughout the district, and consequently often made the scape-goats to account for the deaths of any of the more important members of the neighbouring tribes. From their chief home at the mouth they travel along the river as far as the heads (Banna-yirri, i.e., water-falls); southwards, they visit Bailey's Creek. In former times, they used to travel up the northern coast along Cedar Bay to Archer Point, a distance about midway between the Bloomfield and the Endeavour Rivers; but nowadays, they very rarely come north of their river home; they speak Koko-baldja. Wyalla, locally known as Wai-ál-al is regarded as a head camp; it is the resting-place for natives from Ku-na (Mt. Finlayson, ?Finnegan), from Wú-lu-mu-pan (a tract north of Bauer's Gap), from Wol-pa (the big range lying westwards from Mt. Romeo), and from Yalimba (the district between Wyalla north-eastwards and the sea); they speak Koko-yerla-n-tchi here. The natives met with on the Mission Reserve (Wudjal-wudjal) and at Connemara, i.e., Baird's Selection (Bórru) come from country (Nu-ru) at the head of Granite Creek (the northern branch of the Bloomfield River), from the district (Mu) between Granite Creek and the Bloomfield River, from The Springs, i.e., Cook's Selection (Bul-pan) from west (Mulujin) of Baird's Selection whence they travel to Mareeba (and so get into touch with the Cairns and Atherton District) and from country (Gau-gu) along the eastern branch of

¹¹ Based upon my first journey undertaken here in March, 1898, and from information kindly put at my disposal by Mr. R. Hislop, of Wyalla.

the Daintree River; they all speak Koko-baldja like the Banna-billara. Various remnants of what are said to have once been large and powerful tribes now run between Rossville, Helenvale and Mt. Romeo; they comprise Aborigines from Tandi (King's Lake country and heads of the Middle and East Normanby Rivers), from Chokon (district comprising Mt. Romeo, the Tablelands, Slatey Creek, etc., and perhaps Mt. Amos), and Tan-al-tau-al (country west of King's Lake to the Normanby River). The Wulbur-ara blacks travel from the head of the Mossman River to Byerstown and Maytown; the head-camp of those on the Daintree River would appear to be at Fischer's Selection. I was able to account for two hundred and eighty-seven natives in the whole of this Bloomfield River District.

15. The Cooktown and surrounding district (Pl. xxviii., fig. 2; Pl. xxix., fig. 1). South of the Endeavour River the Koko-yimdir dialect is very corrupt, the natives belonging to this area comprising Mt. Cook, the lower portions of the Annan River, and the coast-country down to Archer Point speaking of it as Koko-imoji. The "homes" of these people are at Mount Cook (Kai-ar), their actual camping ground at the base of the mountain being called Wain-bur, along the Annan River (Yu-ru country), and in the area (Bul-kon) round about Oakey Creek, a branch of the Annan. They visit Cooktown, known to them all as Kákar, and often camp at the 3-Mile (Worra-jagga). North of Cooktown, Cape Bedford is where the natives speak the Koko-yimdir language in its full purity¹². The Starcke River Natives travel to the McIvor River, to Cape Bedford, and to Cooktown where they camp at the 2-Mile. Among their place-names (these blacks speak Koko-yimdir) on the McIvor are the following—Gorton's Selection, Párra; Thygeson's Kárm-bar; Bramighan's, Nó-kal; Wehl's, Winbar-winbar. They speak of Barrow Point as Mo yir; Look-out Point, Tan-yil; Cape Flattery, Yorro, and the country through which the Morgan and Jeannie Rivers run as Walmbar and Yorl-bun respectively. More or less west of Cooktown is the Boggy Creek Reserve for Aborigines, a stretch of country (Birbira) on Butchers Hill Station (Yung-kur). These Yung-kurara used in the old days to have a peregrination including the head of the Daintree River, the Bloomfield River, Mt. Windsor (Kalmbar), and sometimes the Laura River and Maytown, at present however (1899) there are some party feuds on, and the travelling is very limited. At Maytown (Wulbur-

¹² Roth—Bull. 2—Sect. 1.

jurbur) they visit the Wulbur-ara who wander between that township, Laura and Palmerville and speak Koko-minni¹³. They have apparently always been, and still are, at enmity with the Deighton Blacks who speak Koko-warra.

16. In the Princess Charlotte Bay District (Pl. xxv., fig. 2; Pl. xxix., figs. 2, 3), the main original camp or home of the Koko-warra, i.e., where most of their higher initiation ceremonies usually take place is in close vicinity to Balser's Knob. They follow the Normanby and Deighton Rivers as far as the Laura Settlement, they travel up Station and Sandy Creeks to the Morehead River, and westwards they wander over Jeannette's Tableland. In the course of their travels southwards, these Koko-warra come into communication with the Koko-minni from the Middle Palmer River. The Koko-lamalama have their main camp in the vicinity of the mouth of the Bizant River and Jeannette's Tableland; primarily, they are thus coastal blacks, though of late years they have commenced to wander along the tracks of, but not quite to such lengths as, their southern Koko-warra neighbours. In days gone by, the Koko-olkulo had their "home" at the water-holes in the neighbourhood of what is now the Musgrave Native Police Camp. At the present time (1899) they "walk-about" along the higher portions of Saltwater River, and across to the upper reaches of the Hann and Morehead Rivers, while in a northerly direction they wander up to Port Stewart, etc. The Koko-rarnul, the last of the more important of the Princess Charlotte Bay Tribes are somewhat limited in their peregrinations along Saltwater and Morehead Rivers. The following are some of the local place names in the Koko-warra language:—

Balser's Knob	lú-imba	Jeannette's Tableland	gai-wara
Bathurst Head and	} aring-u	Lakefield Station	gó-ra
Flinders' group			
Barrow Point	apóllin	Musgrave Station	pár-jan-ja
Breeza Station	ráu-o	Musgrave Station	} arnáu-o
		(18-mile camp)	
Cape Melville	{ tu-a, yaln-ga, vel irán-bai	Noble Island	mor-kon-den.

Country at back of Bowen Bay ar-wúr

Eastern half of Princess Charlotte Bay coast lamalama

Country to west of Saltwater River ólkulo vel wólkulo

While the tracts of country through which the following rivers run are named thus:—

¹³ See Middle Palmer River District, Sect. 17.

Saltwater River	ngorpai	North Kennedy River	nar-nu
Morehead River	rar-mul	South "	tembu-kúmana
Hann R. and Station Creek	ngum-bu-ar	Laura River	rar-tal
Koolburra Creek	ne-már-o	Deighton River	kar-múka
Rizant River	urr-thurr-wa	Jeannie River	albún, yorl-bun
Jack River	te-ra	Starcke River	kún-jar, dún-jo
Normanby River	win-jarko, kar-wiu		

17. The Middle Palmer River District is of interest especially in that the Koko-minni, who occupy it (Pl. xxx.), form the means of communication between natives on the Gulf and East Coasts. These blacks have their main camp, at the head of the King River at a spot known as Irrangga; their country south of the Palmer River they call Churamada, while that which lies north of it is Oninta. They speak of Mt. Daintree as Konongo, Fernhill Mountain as Mo-yeraka, and Strathleven country as Arthau. In 1896 their estimated number was over two hundred. They have a large circle of friends and acquaintances, and visit the Koko-yerlantchi natives on the Laura River, at Maytown which they speak of as Walpom, and Palmerville known to them as Koron. Their fighting expeditions take them westwards down to the junction of the Palmer and Mitchell Rivers, to a locality known as Antalba where they fight the Kau-waranga. When after food they travel *via* Maytown to Limestone—yams being very plentiful on this route—and there come into contact with the Hodgkinson (Union Camp) Blacks, etc. Nowadays, they never go in a southerly direction, having been hunted from Gamboola and Highbury. For purposes of trade they travel northwards to meet the Koko-warra, Koko-rarmul, and Koko-olkulo people. The Kau-waranga follow the course of the Lower Mitchell River as far as its junction with the Palmer River. Two important Gulf tribes with which these Kokominni come into indirect contact are the Gunanni and the Kundara. The Gunanni are coast-blacks running between the Mitchell and Staaten Rivers; they certainly cross the Mitchell and on the south may proceed to the Gilbert River to meet the Kundara whose territory extends down to Normanton, while to the eastwards they do not go further than Dunbar. The main camp of these Gunanni is believed to be in the close proximity of Topsy's Waterhole, not very remote from the New Mitchell River Aboriginal Reserve. The Kundara exercise rights over the coast country between the Nassau and Staaten Rivers. Mentana Station which is in the close neighbourhood of their main camp is called Ngabengamadam.

18. The Pennefather (Coen) River District¹⁴—Although this account of the district-blacks was gathered at Mapoon it was given me by Pennefather River (=Coen River on the old maps) Aborigines, the Nggeri-kudi, who speak Yopo-dimi (yopo=1st personal pronoun). It would appear that there are probably not half-a-dozen remnants left of the original Mapoon people. The following groups of natives are found in this ethnographical district, the numbers in brackets referring to the sketch map (Pl. xxxi.). The Nggerikudi (2) (Nggeri=sand-bank), whose home is on the north side of the Pennefather River; they are the most numerous of all the coastal people, and the majority of them are now settled at Mapoon. The Gamiti (1) are on the north shore of Port Musgrave, i.e., between the Ducie River and Seven Rivers country. Rá-kudi (3) occupy the south side of the Pennefather River; Taini-kudi (4) (taini=mangrove) the country between Pennefather and Pine Rivers, speaking Anga-dimi (anga=1st. pers. pron.); Denya-kudi (5) (denya=bush) live down on the south side of the Batavia River; and Chong-anji, or Mapoon natives, that portion of Port Musgrave coast-line terminating in Cullen Point. Other groups are the Laini-ngadi (7); O-amro-koro (8) who speak Te-ana-ngada (te-ana=1st. pers. pron.); Cherakundi (9); Gautundi (10); and Winda-Winda (11) who speak Marma-ngati (marma=1st. pers. pron.); the last three groups, perhaps the last four now visit Weipa Mission Station on the Embley River. Amongst the real inland or bush-blacks who naturally do not mix with these coastal ones are the Ducie, Bertiehaugh, and Moreton Tribes, who apparently have no names to specialise themselves by, and possess markedly different vocabularies.

Cullen Point is known as Tratha-m-hallayányana (tratha=a certain fish, the rest of the word signifying sheltering-under-rocks), corrupted into Tullanaringa on the maps. Duyphen Point is called Mo-o-dangana. The country drained by the following rivers is:—

Pennefather River	{ ringdanúno	Mission River	aró-angana
	{ arú-índi	Embley River	adérana
Pine River	yí-paruo		

¹⁴ These notes were originally compiled in 1899 during my first official visit of inspection to the Mapoon and Weipa Mission Stations, to the various cattle runs in the hinterland, and to the Mein, Moreton, and McDonnell offices on the Cape York Overland Telegraph line. I am indebted to the Rev. N. Hey of Mapoon for much of this information.

19. In every group or tribe there exist certain divisions or relationships of rank and family between its individual members, such relationships also commonly holding good between persons of different groups or tribes. The first of these relationships I propose recording is that upon which the individual's social status depends, and which gives him his titular rank or *clima-nym*¹⁵. This rank depends upon his bodily development and in most cases upon his having undergone certain of the initiation ceremonies.

In the Rockhampton District, except perhaps in the area around Miriam Vale, any boy at the first sign of puberty is known as a *walpara*. As soon as he arrives at the full development of this physiological condition he undergoes the first of the ceremonies, and gradually advances in rank under the following "titles" :—

Rockhampton—*Ku-rá-i* (when the decorative scars are cut);
ká-wula (when he has his nose pierced and can marry);
mín-dara, and *mu-lin* (any very old man).

Gladstone—*Ká-ra*, *yanpi*, *kú-nu-an*, *kanka-ánkan*.

Rosewood—*Yeppoon*—*Ká-wula*; *katta* (adult man).

Miriam Vale—*yanbi*, *ínggardo*, *wúr-balim*.

In the case of the females, any very young girl is spoken of as *nai-yín-duro* (Rockhampton), or *ne-kú-rian* (Gladstone). At first puberty she is called *wálpáran* (Torilla), *kám-bal* (Rosewood, Marlborough), or *bál-kuu* (Rockhampton). Having undergone the first ceremony (after which she can marry) at full puberty, she now bears new *clima-nyms* :—

Rockhampton—*tapu-ráu.doro*, and gradually *mu-lin*¹⁶ (any very old woman).

Gladstone—*wá-kalo*, *ká-kalal*, *kú-nu-an*¹⁶, *kanka-ánkan*.

Rosewood—*nánmuní*, *kin-kil*.

Yeppoon—*ár-wuli*, *dapparo*.

On the Tully River, amongst *Mallaupara*, *kokai-kokai* is the term applied to a boy from the time he receives the chest-cut or *chindal*¹⁷ up to the time he eats the eels at the initiation

¹⁵ Roth—*Ethnol. Studies*, etc., 1897—Sect. 68.

¹⁶ The same name as applied to men in corresponding stage.

¹⁷ Roth—*Bull.* 15—Sect. 49.

ceremony when he is known as a ngu-tcha. He is a malari during the time that the belly-cuts are healing, and a chalma onwards, the fully-developed man. A female is a nai-ili when the breasts first begin to protrude, a gatchir at fully developed puberty (corresponding to the chalma stage of the males), a kan-el before bearing a child, and balgari after having borne children.

The progressive titular changes in an individual's life in the Cairns District are here given both in the Yidinji (Y) and Kungganji (K) languages :—

When an infant of either sex walks and gives up suckling it is a ka-wínji (YK), the sexes being distinguished from this time onwards—

Female—kúm-ba (YK) from completion of kawinji stage up to close upon puberty ; yábbnr (YK) at puberty, when she *may* have shoulder-scars inflicted ; and tarkanji (YK) when her first baby appears upon the scene. She then passes gradually into the máitin (K), or tár-anki (Y) stage apparently expressive of the climacteric.

Male—wang-ár-re (YK) from completion of kawinji to puberty ; wúr-kun (YK) at puberty, when he undergoes initiation and receives the transverse cuts (mo-in, moingga, or war-dir) between the navel and breast. He is then spoken of as a manda-kanjánji (YK) when his first child begins to walk about ; nganda (YK) if his children are still all young ; bí-narla when the latter are all old ; and wállō-buri when he is very old, indeed to express the disappearance in great measure of the body-scars.

The Cooktown District clima-nyms, from the lower to the higher grades, are waral, kabir, ngando, and kamba-kamba for the females, with diran, yerka, bama, and dirainggur for the males.

Those for the Princess Charlotte Bay District have already been detailed when dealing with the local initiation ceremonies¹⁸.

Amongst the Kundara, with whom, as I have already mentioned the Koko-minni of the Middle Palmer District come into

¹⁸ Roth—Bull. 12—Sect. 6.

contact, the following are the titular names applied to the males:—

Bama-ngaman is a boy at early puberty; he attends his first initiation ceremony or yindarang.

Yel-vigvig after full puberty with a little moustache; he attends the second ceremony or yital.

Pita-mak is after he develops a full beard and moustache, and having undergone the ceremonies, is now allowed to marry.

Mo-kanan as age progresses, and mo-ekwallim when very old, and the cicatrices fade.

In the Pennefather River District the following are applied:—
Dai-ingata is a boy at early puberty when he first attends the initiation dances (prumo); pungandrichi at late puberty when the tooth avulsion takes place; trallakuto with a beard and moustache; watapu a very old man. Ji-opadi is a girl at early puberty; morgatana at late puberty; dro-anana after bearing her first child; and d6-apruto after the child-bearing age.

20. With regard to the internal divisions of the group or tribe, depending upon family relationships, I cannot do better than refer the reader, as a preliminary, to a perusal of Chapter iii. of my "Ethnological Studies." I there threshed the subject out fairly thoroughly for that district, with the result that, in spite of the very few alterations and additions since discovered and now incorporated, I propose taking it as a standard for comparison. Gamo-matronyms have been found in the East-coast Districts; in the Rockhampton area¹⁹, except at Gladstone and Miriam Vale, as wittaru and yangaru, corresponding with the Boulia (Pitta-Pitta) utaru and pakuta respectively.

The four paedomatronyms of the North West Districts—the Kupuru, Wungko, Kurkillia, and Banbari—I have been able to trace personally, since 1895, and to identify practically throughout the length and breadth of North Queensland, except in the Peninsula (Pennefather River) about which something further has to be said. The following is a fairly typical list of them²⁰:—

¹⁹ I had previously denied its occurrence at Rockhampton—See Ethnol. Studies, etc., 1897—Sect. 62 f.

²⁰ Only the male form is given, the female is denoted by -n, -an and other suffixes.

Amongst tribes occupying the border-country between Queensland and the Northern Territory, are the Yaro-inga to be met with at Headingley and Lake Nash on the Upper Georgina River, and the Workai-a²¹ higher up the river at Camooweal, etc. These, in common with other people in the Territory have eight pædomatryns, (with the one term applicable to both male and female members of each division) traceable into the four of the rest of North Queensland as follows:—

Yaro-inga	Workai-a	
alloguara	pelyarinjo	{ kupuru
andraja	pleugo	
odalja	woreto	{ wungko
angalaja	jerameramo	
a-ngella	kangil	{ kurkillia
anaura	yekamaro	
biltara	pangarinjo	{ banbari
mo-jo	warko	

The Karawa Tribe, at the head of Settlement Creek in the Gulf Country, to be often met with at, probably their chief camp, Wollgorang Station, about four miles within the Northern Territory border, also have the eight primary divisions, but having separate terms for the male and female members, apparently possess sixteen; so far I have not had sufficiently reliable interpreters to identify them with the Boulia ones.

²¹ Throughout the whole of North Queensland, sexual communism, with its specialisation of marriage, is only permissible on the following lines, hence these four divisions have been termed exogamous groups or divisions:—

male	+	female	=	resulting offspring
Kupuru	+	Kurkella	=	Banbari
Wungko	+	Banbari	=	Kurkulli
Kurkillia	+	Kurpuru	=	Wungke
Banbari	+	Wungko	=	Kupuru

the arrangement being graphically illustrated in the table in the "Ethnological Studies"²².

But if the term "exogamous" division is to be preserved, it must be clearly borne in mind, that the arrangement does not *per se* prevent consanguinity, that it does actually prevent the

²¹ These are identical, so one of the authors tells me, with the Waaga of Messrs. Spencer and Gillen.

²² Roth—Ethnol. Studies, etc., 1897., opp. p. 64—Up till about four years ago I thought that I had obtained from the Annan River District a set of divisions shewing a different line of descent to that met with in Boulia; on further investigation they conform to the usual rule.

union of couples between whom there cannot possibly be any consanguinity, and that on certain definite occasions over a large area of country it may be ignored'. Consanguinity is everywhere prevented by laws of its own; a man for instance may not marry his mother's brother's daughter, his father's sister's daughter, his daughter's daughter, etc., although they fall within the division out of which it is lawful for him to pick a wife — this is usually the solution of the difficulty which I understand observers have now and again come across in the case of natives unable to live sexually with others apparently belonging to the proper exogamous divisions.

As is well known, each of these exogamous divisions is tabu from either eating, killing, touching, etc., certain animals, and if by totemism pure and simple is to be understood a certain relationship between an individual or group of individuals and an animal or group of animals, then by all means let these divisions be called totemic. In no way, however, can they be deemed totemic in the sense of the totemism described as being met with in the Central Australian Tribes by Messrs. Gillen and Spencer, my views on this matter being recently confirmed for the extreme North Australian Tribes by Professor Klaatsch. More than this, though as already shewn I have traced the identity of the divisions from one end of North Queensland to the other, the animals tabu vary with each particular locality, i.e., there is no constancy between the alleged "totem" and the division. Some typical examples taken at random throughout the country are the following :—

. EASTERN COAST-LINE				
	<i>Kupuru</i>	<i>Wungko</i>	<i>Kurkilla</i>	<i>Banbari</i>
Pr. Charlotte Bay				
(1) Koko-olkulo Blacks	various species of poison-snakes	carpet snake; bird like the morpork	goose plover	bird like an owl
(2) Koko-warra Blacks	red kangaroo dingo giant lily brown snake owl	(same prohibitions as Kurkilla)	goose black duck alligator cockatoo blue lily	(same prohibitions as Kupuru)
Bowen (Yuro) Blacks	emu eel turtle	brown snake carpet snake	'rainbow' opossum; ground iguana; frilled lizard	sp. of honey bandicoot eagle hawk stingaree porcupine

²³ Roth—Ethnol. Studies, etc., 1897—Sect. 71, a, b, c.

ii. ACROSS COUNTRY TO LOWER GULF & WESTERN DISTRICTS

Etheridge River and Georgetown Blacks	red kangaroo alligator (?)	rock wallaby opossum	emu bony bream garrfish	rock kangaroo black bream
Upper Flinders River (Wunamurra)	carpet snake emu	..	eagle hawk black & brown snakes	black duck turkey

iii. LOWER GULF OF CARPENTARIA AND WESTERN DISTRICTS

Between Sta- aten & Nassau Rivers Kundara Blacks	poison snake owl	two unidenti- fied species of bird	water snake carpet snake	tiger snake brown snake
Cloncurry (Maitakudi)	iguana whistler duck carpet snake	porcupine emu kangaroo	water snake corella eagle hawk black duck turkey	carpet snake dingo
Leichhardt- Selwyn Ranges (Kalkadun)	emu carpet snake brown snake mountain- snake porcupine wallaby rat opossum mountain- kangaroo	emu mountain- kangaroo wallaby honey porcupine opossum carpet snake brown snake mountain- snake fish, various sp.	pelican whistler duck black duck turkey plain kangaroo fish, various sp.	whistler duck wood duck native- companion rat bandicoot plain- kangaroo carpet snake
Boulia District (Pitta Pitta)	iguana whistler duck black duck blue-fellow- crane yellow dingo small yellow sp. of fish	scrub turkey eagle hawk bandicoot brown snake black dingo white duck	kangaroo carpet snake teal brown-headed white-bellied- duck various sp. diver birds trumpeter fish black bream	emu yellow snake galah parrot sp. of hawk.

22. On the other hand, as I have already shewn²⁴ it is probable that these (exogamous, for want of a better term) divisions have been originally devised, by a process of natural selection, to regulate the proper distribution of the total quantity of food

²⁴ Roth—Ethnol. Studies, etc., 1897—Sect. 71 ; Bull. 12—Sect. 2.

available. Examples here and there lend confirmation to this probability. At the mouth of the Batavia River for instance, on the promontory of land to the left of it projecting into Albatross Bay, there are, or rather used to be, before the civilisation of the natives was taken in hand by the Mapoon Missionaries, four exogamous divisions named after separate localities. The Nama-kurgi and Ba-kurgi were named after and owned lands on the river side, the Lar-nganama and Ba-marango on the Gulf side of the promontory in question. The Bakurgi and Bamarango were so named after islets (ba), the Namakurgi after the superabundant local growth of the nama plant (used for thatching huts), while the Lar-nganama got their name applied on account of a special timber, *Acacia rothii*, Bail.—the local lar. These four divisions, which I was unable to identify with the four otherwise common throughout Northern Queensland, could only marry on the following lines:—

male	+	female	child
nama-kurgi		ba-marango	ba-kurgi
bakurgi		lar-nganama	nama-kurgi
lar-nganama		ba-kurgi	ba-marango
ba-marango		nama-kurgi	lar-nganama.

The wife took up her abode at her husband's camp, but the offspring as they grew up became members of and belonged to another camp. I found traces of a similar arrangement in vogue at Murray Island in Torres Strait, and am informed that a similar one is here and there met with in New Guinea. In the Bloomfield River District, the four divisions were all names of bees each being specially associated with different districts. Again, amongst the large Koko-warra Tribe of the Princess Charlotte Bay District is to be met the curious example of identical animals being tabu to two of the exogamous divisions, the Kurkillia and the Kupuru with the result that the limit of food-supply available is exactly balanced. Another trace of the probable origin of these exogamous divisions lies in the fact that in any camping place, all the members of the same division (except of course those who are consanguineous) occupy the one area of the camp. The grouping of certain animals, plants, etc., on the Tully River may (Sect. 24) also prove to be another remnant.

23. According to the particular exogamous division to which an individual belongs, so he bears relationship to other members of the remaining divisions. For as already explained²⁵ every male is primarily someone's brother, father, brother-in-law, or

²⁵ Roth—Ethnol. Studies, etc., 1897—Sect. 63.

mother's brother, while every female (virgin or matron) is someone's sister, mother, sister-in-law, or father's sister. These particular relationship names, which, for reasons given, I have called hetero-nyms, vary in the different ethnographical districts. In the Rockhampton District, they are:—

Locality and tribe	Rockhampton Tarumbal	Torilla, Pine M't'n Ku-inmur-burra	Gladstone Wakka	Miriam Vale Koreng-koreng
brother (older)	má-rami	marang	ká-ro	dadtha
" (younger)	"	wú-yiru	ku-ni	"
sister (older)	na-buru	ná buru	yá-wunan	wá-dim
" (younger)	"	"	yí-lan	"
mother's brother	nammo	nammo	bá-bi	mámma
mother	nai-ya	nai-ya	nábba	má-mi
brother-in-law	nú-pa	nu-pa	kinulam	mú-nilam
sister-in-law	gen	kin-kil ²⁶	in-won	"
father	bí-na	bí-na	pí-ya	bá-ba
father's sister	bín-dir	bín-diru	bá-bo	yabbi

In the Princess Charlotte Bay district they are:—

	<i>Kokowarra</i>	<i>Koko-rarmul</i>
brother (old)	ár-ma	ár-ma
" (young)	ar-thúrrta	arrárda
sister (old)	párpa	párka
" (young)	i-thúrrta	urrláda
mother's brother	garwúta	arwúta
mother	mang	márka
brother-in-law	ku-dánta	ting-an
sister-in-law	ku-dánta	pan
father	addi	a-wí-aka
father's sister	inni-ra	mí-ada

And so I could go on throughout all the areas of North Queensland over which I have wandered, but such details would only render this work too cumbersome, and are not of sufficient importance for publication, suffice it to know that they exist. For the same reason I am omitting all mention of the genea-nyms, and auto-nyms; the former have already been carefully worked out for the Cooktown District²⁷ where I have had the assistance of local linguists in checking them.

²⁶ Also means adult woman.

²⁷ Roth—Bull. 2—Sect. 6.

24. Divisions of inanimate nature, animals, and plants, have been occasionally met with, but really satisfactory explanations have not been forthcoming. Thus, at Cape Grafton in 1897, independently of the local mission auspices, I came across a local account of a binary division of Kuragulu and Kurabanna (banna=water), that is to say things on land generally distinguished from those on water. The former, indicative of red earth includes everything relating to the land, *e.g.*, red clay, grass, sun, wind, rock, star, fire, and land animals such as kangaroo, bandicoot, black iguana, yellow iguana, emu, and pelican; the latter comprises water, and white or light coloured things and includes mud, cloud, rain, thunder, fresh and salt water, eels, wild duck, shark, alligator, water-snake, and all white timbers.

On the Tully River the respective grouping is more certain. Thus, plants (wherein sex is not recognised) are divisible into four groups, containing special timbers as follows :—

Chalkai-gatcha . Pencil Cedar, Moreton Bay Chestnut.

Chalkai-dir...Contains a particular white-wood, the sap of which is utilised for sticking feather-down on the body.

Chalkai-chamara...Silky Oak.

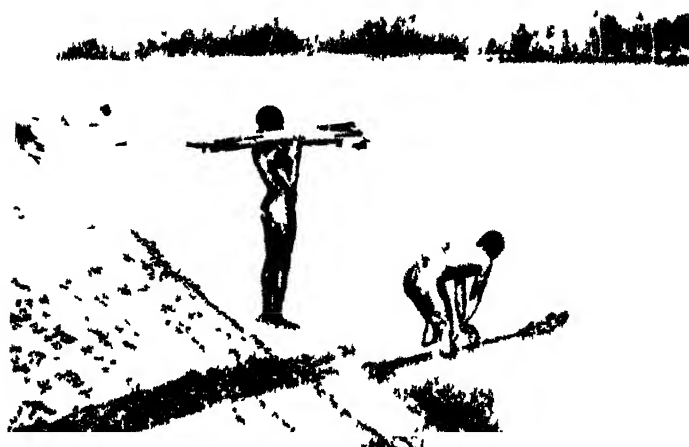
Chalkai-chiri...Myrtle.

Chalkai is the Mallanpara term for anything big and so old (and thus comes to be also applied to an old person). Grasses and small shrubs are not put into groups or divisions. Indeed, very little appears to be known concerning these groups, they being referred to nowadays only on particular occasions. For instance, in my presence, in 1902, a man on the river-bank was talking to my host, Mr. Brooke, of a canoe passing down the stream which had been manufactured from the bark of a Myrtle-tree that was portion of his real estate; he spoke of the vessel, not by the term kukai (signifying a canoe) but expressed himself by saying, "there goes my chalkai-chiri." These same Tully River Natives do not classify the animals like the plants into groups, but anything extra big, large, etc., anything out of the common, with each kind of animal is spoken of by a different name²⁸.

²⁸ I have already recorded this in Bull. 2—Sect. 2—(note).

EXPLANATION OF PLATE I

- Fig 1 Logs of light wood used as floats for crossing water — Mitchell River, &c
- „ 2 Logs tied together forming a simple primitive raft The man propelling the structure with a pole had attended a pun (Bull 4—Sect 15), his head and face being more or less still covered with feather down —Tully to Russell and Mulgrave Rivers



1



EXPLANATION OF PLATE II

- Fig 1 V shaped log raft of numerous light saplings, with butts all at
one end — Wellesley Islands
- ,, 2 The same form of raft with seat of dried grass, &c

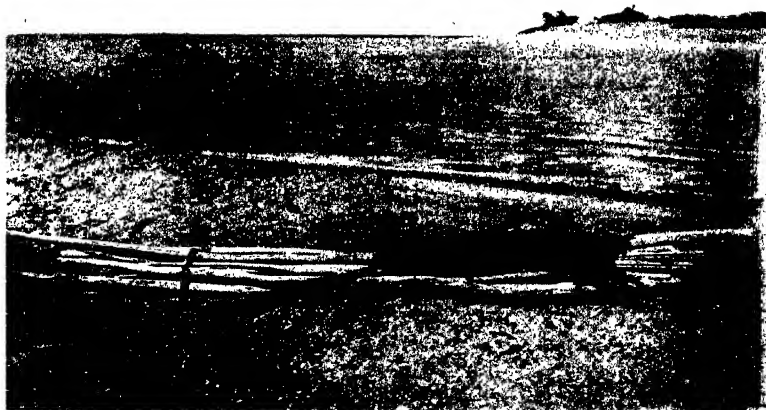


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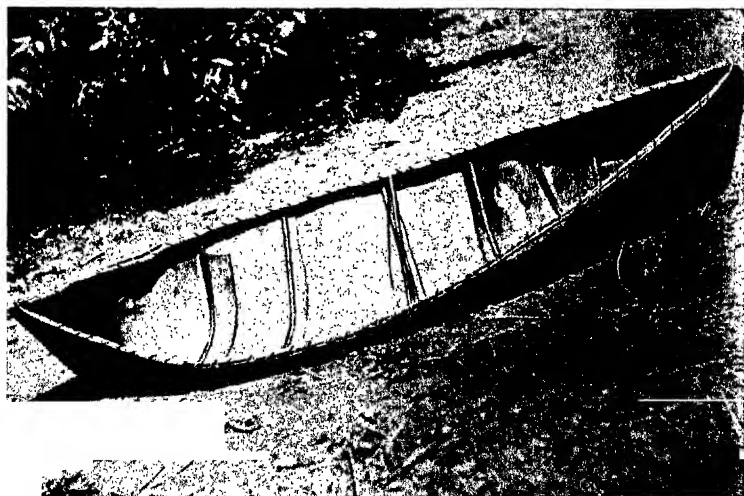
EXPLANATION OF PLATE III.

- Fig. 1. V.-shaped log raft afloat, showing method of propulsion.—
Wellesley Islands.
- „ 2. The same ashore, with grass seat and paddle.



EXPLANATION OF PLATE IV.

- Fig. 1. Single-sheet bark canoe with blunt straight ends.—Gulf Coast (Batavia and Ducie Rivers to the Archer River).
,, 2. The same afloat showing capacity for one occupant who kneels resting his buttocks on his heels, and paddling with two oval pieces of bark.



EXPLANATION OF PLATE V

- Fig 1 Single-sheet bark canoe with oblique ends, showing method of spreading the sides by means of a stretcher, and means of propulsion —Gulf Coast (Batavia and Pennefather Rivers)
- , 2 Three sheet bark canoes —Whitsunday Island



1



EXPLANATION OF PLATE VI.

- Fig. 1. Dug-out with outriggers, and projecting terminal lip or platform for the hunter to stand upon.—Batavia River.
- „ 2. Dug-outs showing position of booms and method of attachment to the floats or outriggers.



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2

EXPLANATION OF PLATE VII

- Fig 1 Dug out cut square at either extremity, with one outrigger capable of carrying five or six people — Mossman River to Cape Grafton

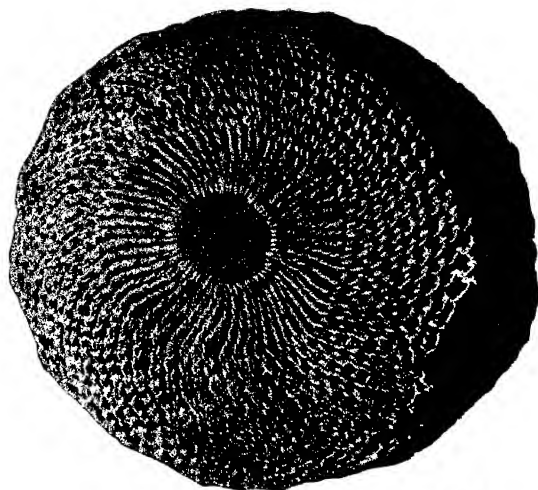


EXPLANATION OF PLATE VIII.

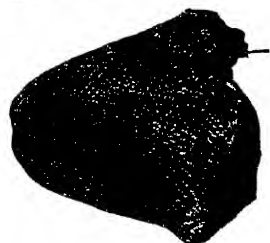
- Fig. 1. Man of the Carpentaria Gulf country with beard waxed into two points.
- „ 2. Head net worn to prevent the hair thrombs from dangling over into the eyes; manufactured by men only in the Boulia and Selwyn-Leichhardt Districts.
- „ 3. Similar net to Fig. 2.
- „ 4. Long forehead-net, or miri-miri, worn to keep the hair well back.
- „ 6. Digital-amputation.



4



5



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8



9

EXPLANATION OF PLATE IX.

- Fig. 1. Tube ear ornament worn by men on the Pennefather and Embly Rivers, Gulf of Carpentaria.
- ,, 2. Decorative scars, or cheloids, on a man's back.



EXPLANATION OF PLATE V

- Fig 1 Decorative scars, or cheloids, on man's chest and abdomen
,, 2 Feathering of the body for the Molonga performance of the
 Boulia Corroboree, and limited to men only ; prevalent throughout the North-western Districts



EXPLANATION OF PLATE XI.

- Fig. 1. Most primitive form of artificial break-wind.—Wellesley Islands.
,, 2. Sleeping platform.—Lower Normanby River.



EXPLANATION OF PLATE XII

- Fig 1 Another form of primitive break wind — Wellesley Islands
,, 2 Completed hut, thatched with "blady grass" over a withy
frame work of hoops — Lower Tully River



1



2

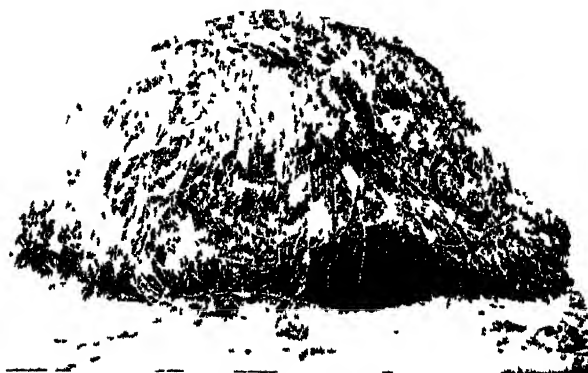
EXPLANATION OF PLATE VIII

- Fig 1 An early type of shelter, consisting of a sheet of bark fixed lengthways and edgewise into the ground
- 2 Composite huts at the junction of the Palmer and Mitchell Rivers —Photographed by Inspector Garroway, 1899



EXPLANATION OF PLATE XIV

- Fig 1 Grass thatched hut, with small entrance —Noimanton
,, 2 Simple ridge-pole form of structure in skeleton, before leafy
switches are leant against it



1



EXPLANATION OF PLATE XV

- Fig 1 Skeleton of dome-frame hut formed of heavy saplings.—North
west Districts
,, 2 Another and more advanced form of ridge pole structure



EXPLANATION OF PLATE XVI

- Fig 1 Circular frame work of switches struck into the ground along the limits of the area to be enclosed —Northern Coast line
- 2 Simplest form of bark shelter composed of a single sheet bent at its middle the ends being firmly fixed in the soil



EXPLANATION OF PLATE XVII

- Fig 1 The sapling framed hut seen in Plate xv, fig 1, covered with
bushes, &c —North west Districts
,, 2 Cabbage-tree palm leaf hut Kennedy River



1



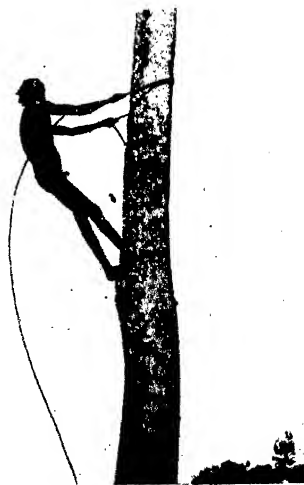
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EXPLANATION OF PLATE XVIII.

- Fig. 1. Position assumed in sleep at Capes Bedford and Grafton.
,, 2. Common position assumed in standing at ease.
,, 3. Man climbing a straight tree with the aid of the climbing-cane,
and the free end of the cane passed over the elbow.



1



3

EXPLANATION OF PLATE XIX.

- Fig. 1 Man squatting with the shins doubled underneath, the right one tucked under the left thigh, the left shin lying on the right thigh
- „ 2 Man squatting on the buttocks.
- „ 3 Man squatting, a modification of Fig. 1.
- 4 Man sitting, the right leg prone and doubled, the left upright and bent



EXPLANATION OF PLATE XX

- FIG. 1 Butt of tree clutched with the two feet on the same horizontal level the knees being kept well out — Lower Gully River District
- 2 Man ' walking up, the weight of the body thrown backwards



EXPLANATION OF PLATE XXI

- Fig 1 Man climbing a vine hand over hand
,, 2 Man climbing a tree by means of the climbing cane, the extremity
of the cane passed behind his right knee, which is acutely bent
, „ Another example of climbing by means of the climbing cane
, 4 Forked sapling placed against a tree to be climbed, to aid ascent.
—Cape Bedford



EXPLANATION OF PLATE XXXII

- Fig 1 Man climbing tree with the aid of a bark strip held at either extremity —Coen and Pennefather Rivers
,, 2 Tree climbing by cutting steps right and left alternately



EXPLANATION OF PLATE XXIII

- Fig 1** Partial absence of pigmentation in the hands and feet — Princess
Charlotte Bay
- , **2** Goitre in a Kalkadun woman — Cloncurry



71



DESCRIPTION OF PLATE XXIV.

- Fig. 1** Deformity allied to congenital club foot, seen in two old men, brothers, near Barrow Point. In both cases the soles could rest perfectly flat on the gun case below.
- , 2 A kind of hammer-toe seen in a woman at Cape Grafton, the fourth toes of both feet being affected.
- , 3 A similar case at the Tully River in which the third toes are affected.
- , 4 Another instance from the Tully River in which the fourth toes are affected.



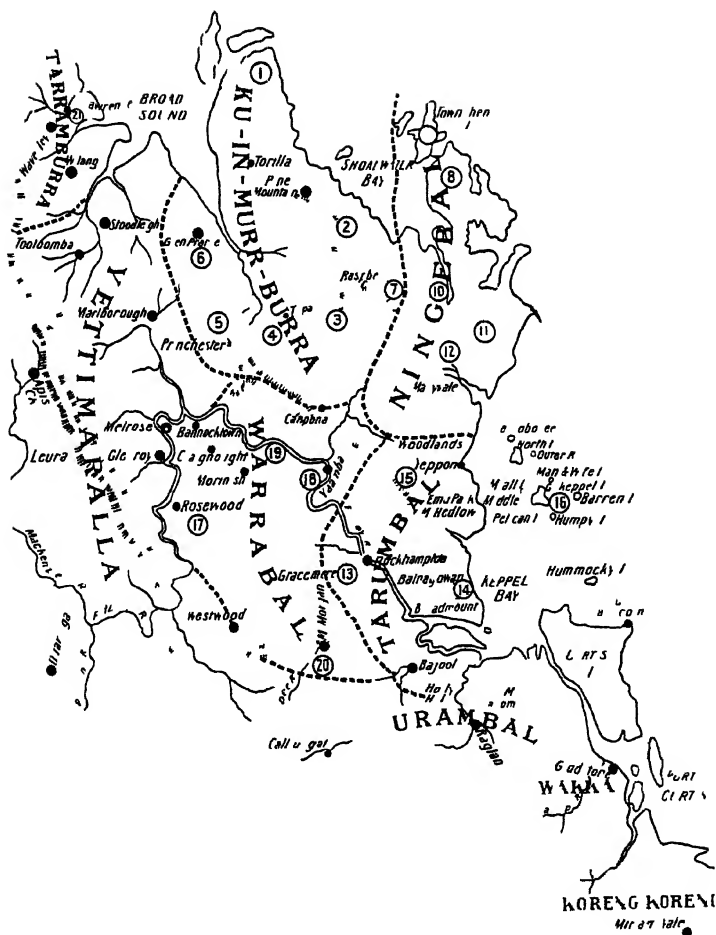
EXPLANATION OF PLATE XXV.

- Fig. 1. "Dinah of Yaamba —An example of a Rockhampton District woman.
- „ 2 Examples of the Charlotte Bay District natives—Cape Melville men, 1899.



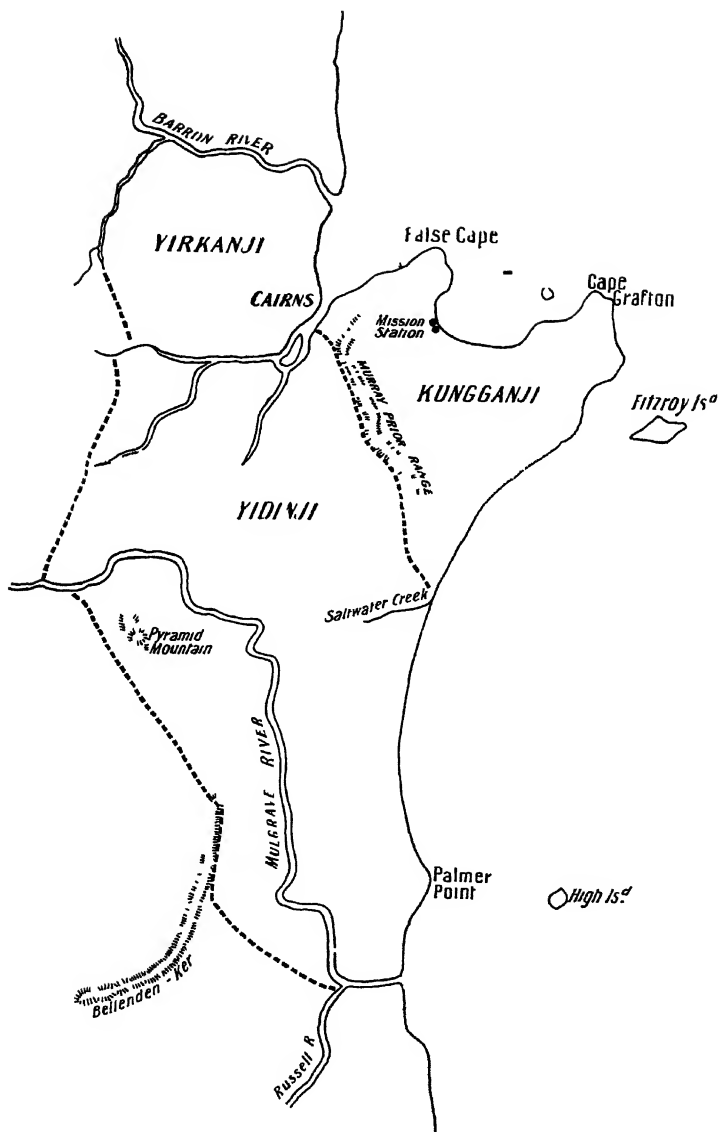
EXPLANATION OF PLATE XXVI.

Sketch map of the Rockhampton and surrounding Coast District, showing the main tribal boundaries. The numbers in circles refer to the component groups of the different tribes.



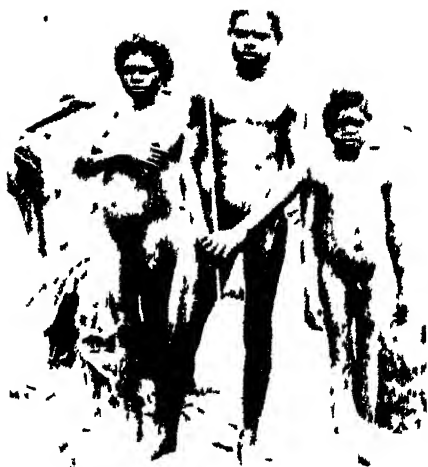
EXPLANATION OF PLATE XXVII.

Sketch map of Cairns and surrounding district, showing the locations of the various tribes.



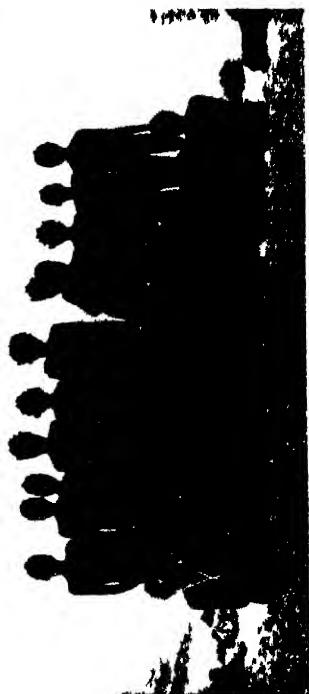
EXPLANATION OF PLATE XXXIII

- Fig 1 Examples of Cairns District natives (men)—Photograph by
Messrs Handly and Cross, Cairns
, 2 Examples of the Cooktown District natives (women)



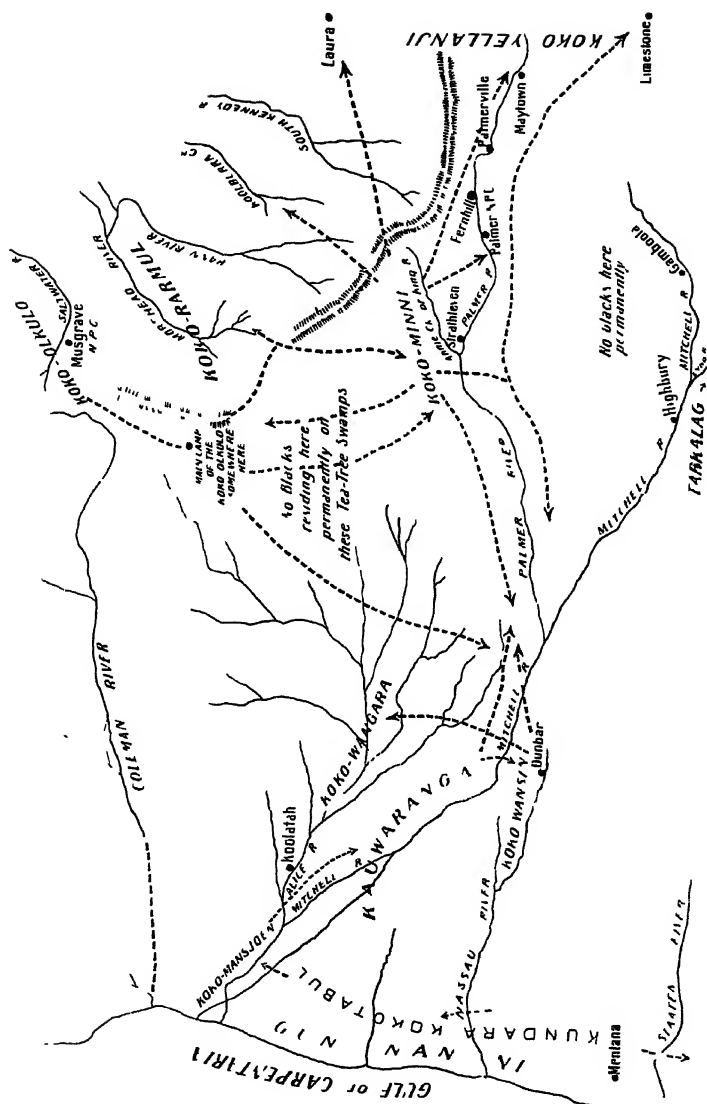
EXPLANATION OF PLATE XXIX

- Fig 1 Examples of Cooktown District natives (men)
2 Examples of the Charlotte Bay District natives—Cape Melville
women 1899
3 Mainland abreast of Cannucross Island —Photographed by Capt
G Pym



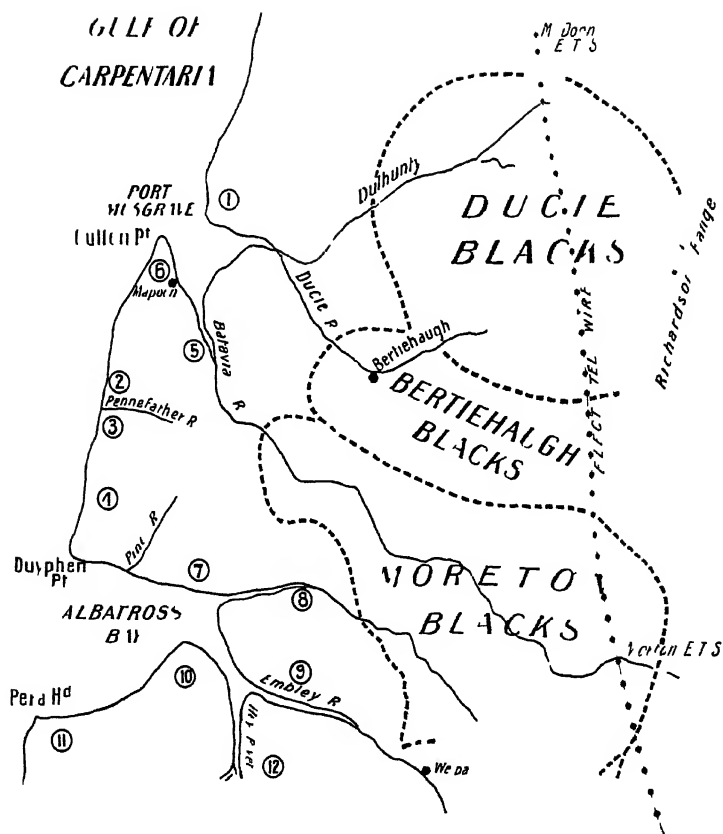
EXPLANATION OF PLATE XXX.

**Sketch map showing the location of the Koko minni and their
relation to other tribes.**



EXPLANATION OF PLATE XXXI

Sketch map to illustrate the territorial divisions of the tribes in
the Pennefather (Coen) River District



DESCRIPTION OF CRANIAL REMAINS FROM
WHANGAREI, NEW ZEALAND.

By W. RAMSAY SMITH, D.Sc., M.B., F.R.S.E., Permanent Head
of the Department of Public Health of South Australia;
Fellow of the Royal Anthropological Institute of Great
Britain and Ireland.

(Plates xxxii.-xxxiii.)

In February, 1910, Mr. W. M. Fraser, County Engineer of Whangarei, New Zealand, wrote to me that he was forwarding a box containing the upper part of two human skulls. He said that until about two years ago these remains had been hermetically-sealed under fifty feet of decomposed sand for not less than seven hundred or one thousand years, judging by the nature and formation of the country, and that the bone marked "A" was found on a lower level than the one marked "B." The box contained two packages. In one were two pieces of bone marked "A"; in the other there were five or six pieces marked "B."

I first cemented together the parts marked "A," and examined them. They formed the whole of a frontal bone and part of the parietals. After an extensive examination of the fragments and a comparison with other skulls of various races I made a summary of the facts and inferences.

After I had pieced together the fragments marked "B" I found that they and those marked "A" all belonged to the same skull. The amount of skull present made it possible for one to make a far greater number of measurements for comparison, and gave a fairly accurate idea of its peculiarities (Pl. xxxii., fig. 1).

Although the bones have the appearance of having been exposed to the weather, the lines defining the boundaries or attachments of muscles are fairly well marked. From this fact and from certain other appearances one infers that it is the skull of a full-grown subject, in all probability a male. There is no appearance of disease nor any sign of artificial deformity produced either during life or after death.

One striking feature is the thickness of the bones. In some parts the frontal bone measures 16mm. in thickness, and the

parietals in places are little if anything less. The thickening is also pronounced in the region of the asterion and the occipital protuberance. The spongy bone is well marked between the outer and the inner tables.

In a view from above the cranium is seen to be elongated, and were it not for the fairly well marked parietal eminences it would be properly termed oblong-looking. The frontal portion is unusually long, smooth, and rounded. It has the frontal eminences distinctly marked. There is no trace of a metopic suture. There is a flattened lozenge-shaped area above the glabella. From the upper part of this to the bregma there is a slight ridge. Behind this the cranium is distinctly scaphocephalic in form, with marked flattening on the left side and still more marked flattening on the right between the bregma and the parietal eminence, and this is associated with an increase, on the right side, in the distance between the sagittal suture and the parietal eminence (Pl. xxxii., fig. 2). The median ridge gives the skull a distinctly pentagonal outline when viewed from behind (Pl. xxxii., fig. 3). The temporal ridge of the frontal bone, about midway in its course backwards, divides into an upper and a lower limb. The upper limbs on each side run high up on the vault and at a point about 1cm. behind the bregma are within 68mm. of each other. Each passes backwards well up on the parietal eminence and strikes the lambdoid suture about midway between the lamda and the asterion. On the parietals these superior lines are markedly double, the distance between the component parts being about 1cm. The superior curved lines of the occipital bone form a large raised crescentic mass. This does not appear to be caused by any diseased condition. Unfortunately the lower portion of the occipital, forming the posterior boundary of the foramen magnum, is imperfect. Probably about 14mm. of the arc is wanting.

The coronal suture is simple from the bregma as far as the stephanion on each side. Beyond this it is obliterated. The sagittal suture has been dentated in character, but is nearly obliterated except at its posterior portion. The lambdoid suture is well marked and dentated or serrated. There is no appearance of pathological synostosis.

There is one parietal foramen: it is on the right side. Below the superior curved lines of the occipital there is one foramen in the middle line, and there are two foramina, a right and a left, below this.

A view from below shows that the sutures on the inner table are all obliterated. The depressions for the blood vessels are fairly large and correspond in distribution with those seen in the

higher races. The lateral sinuses of the occipital bone are at the same level as the superior curved lines. The frontal crest begins half-way down the bone and as it passes downwards it becomes a very prominent ridge.

An examination of the eyebrow region (Pl. xxxii., fig. 4) shows that the internal third of the supra orbital margin on each side is much rounded, and is coalesced with the superciliary eminence; the external two-thirds is sharper, but still comes within the category of "rounded" as orbital margins go. On the right side there is a notch for the supra orbital nerve, on the left a foramen; and from these a groove or depression passes obliquely upwards and outwards on each side, separating the superciliary eminence from the trigonum supraorbitale. The trigonum is not so flattened as in modern peoples but has the rounded appearance often seen in the Australian aboriginal and some other races. The superciliary eminences are distinctly marked on each side and are continuous with the glabella. The conditions in this region conform with Cunningham's type II, which is very common in the Australian aboriginal and is the form that exists in the skull of *Pithecanthropus*.

The frontal sinuses are fairly large (Pl. xxxii., fig. 5). It has to be noted that the front and back walls of these sinuses are both thick as contrasted with the condition found in many Australian aboriginal skulls, in which the posterior wall is very thin while the anterior wall is much thickened to form a very large portion of the projecting glabella and the superciliary ridges. The notch at the root of the nose is shallow as contrasted with the deep indentation which is almost universal in the aboriginal. This character in the Australian, however, as appears from a variety of considerations, is not a primitive one; nor is its associated feature, viz., the great projection of the glabella.

One other character demands attention. A horizontal line drawn through the nasion shows a relatively large part of the orbits above it, and these portions of the orbits are rounded in form—the right more so than the left. This, together with the characters already mentioned, forms an assemblage of primitive characters in the eyebrow region of this skull.

It may be well at this point to give some details regarding the curve of the front bone.

For purposes of comparison, I have tabulated (see Table 1) certain measurements of this skull along with those of two Moriori skulls in my possession, four Maori and one Fijian skull in the South Australian Museum, which the Director, Professor E. C. Stirling, kindly allowed me to examine, and a New Cale-

donian skull in my collection exhibiting mixed Polynesian characters described by Professor David Waterston.

The table shows that the frontal curve angle, 134° , is less open (that is, the curvature is greater) than in the two Moriori skulls and than in the average of all the Maori skulls, 134.75° . This means that the actual forehead portion is more rounded, less flattened, than among the Morioris and Maoris. The following figures from Cunningham will show how the frontal curvature compares with skulls of Australian aboriginals. In eight males from Victoria the figures for the angles were 134° , 136° , 133° , 133° , 130° , 131.5° , 133.5° and 133° , giving a mean of 133° . In five females from Victoria the figures were 130° , 132° , 131° , 133° and 126° , giving a mean of 130.4° . In ten males from Queensland the mean was 133° , the extremes being 127.5° and 146° . In two females from Queensland the figures were 125° and 140° . In one South Australian skull the angle was 141° , in a Central Australian 141° , and in a skull from New South Wales also 141° . I measured two aboriginal skulls—almost the first that came to hand, and I find that one gives an angle of 127° and the other an angle of 146° —almost the extremes of roundness and flatness.

Cunningham is inclined to place more reliance on the results yielded by the index of the frontal curve than on the angle of the curve. This index in the Whangarei Skull is larger (*i.e.*, the curving of the bone is greater) than in the two Moriori and the four Maori, and much the same as in the Australian where the means of indices given in Cunningham are 22.4, 23.9, 21.4, 23.3 and the indices of single skulls are 17.3, 18.4 and 18.2. In seven Scottish crania (six male and one female) the figures were 20.2, 26.2, 22.1, 25.4, 23.8, 25.2 and 21.7, giving a mean of 23.7.

It may be said that the Whangarei Skull in respect to the curving of the frontal bone, comes within the limits of the Australian which are very wide, corresponds with what is found in some Maoris, Fijians and New Caledonians, and does not differ greatly from what may be found in individuals belonging to white races.

Before I had discovered that all the fragments sent to me belonged to one skull, I had made a somewhat extensive inquiry into the occurrence of frontal bones having a longitudinal arc as large as this one. From a consideration of the measurements made of Australian and South Seas skulls by Turner, Scott Waterston, Duckworth, Klaatsch and others, and of Barnard Davis's descriptions of skulls of Ancient Britons, aboriginal Swedes and Danes, Ancient Romans, Anglo-Saxons, Scandinavians and Romano-Britons, it appears that frontal bones with a longitudinal arc of 136mm. or over have usually small trans-

verse diameters and belong to skulls that are very long, very narrow, of great cubic capacity and not infrequently of great thickness.

For the purposes of comparison several important absolute measurements can be made on the skull and also some approximate ones. These are tabulated (see Table II) along with those I have made of the skulls already mentioned and a South Australian skull in the Stuttgart Museum described by Klaatsch.

The chief feature of the skull is its great length both absolutely and relatively to its breadth. It is in a very high degree dolichocephalic, its cephalic index being only 67. The height, unfortunately, can only be estimated comparatively and approximately. When Moriori "B" and Whangarei are placed with the occipital bone resting on a table and the nasion in each case at the same height above the table the top of Whangarei skull stands 2cm. above the top of the Moriori skull. This would give a basi-bregmatic height of 148mm. This estimate can be checked by comparison with other skulls through approximate determination of the nasion point in various ways. The skull therefore is remarkable for its height as well as its length, the height also being greater than the breadth. From the measurements thus obtained one would estimate, by Topinard's formula modified by Manouvrier, the capacity of this skull at about 1,600cc., allowing for thickness and other peculiarities.

In order to facilitate comparison of the brain-containing portion of this Whangarei skull with the corresponding cavity of the two Moriori, four Maori skulls, the Fijian and the Stuttgart South Australian skull, I have made tracings with what rough appliances were ready to my hand and have set forth the measurements in Table III. The tracings of this skull (fig. 52), and the measurements are made in such a way as to allow them to be compared with Klaatsch's. An examination of the figures will show that the part of the skull that lodges the brain is very capacious, even after all allowances are made for thickness of the bones and for the projecting mass at theinion, and for the small transverse diameters. The Stuttgart South Australian skull, which is the longest in Klaatsch's list is practically of the same length as the Whangarei skull but is considerably less in the height of its cranial portion, had a capacity of 1,450 cubic centimetres.

In view of recent researches and speculations regarding the value to be attached to certain characters as primitive features, some remarks are necessary regarding other measurements of the Whangarei skull.

It will be noted that the glabello-inion, glabello-lambda and greatest lengths are practically equal, a condition found in the Neanderthal type and *Pithecanthropus*, and a feature that is regarded as marking a very primitive condition. It is interesting to note that the Moriori skulls "A" and "B" show a greater departure from this condition than do the four Maori skulls.

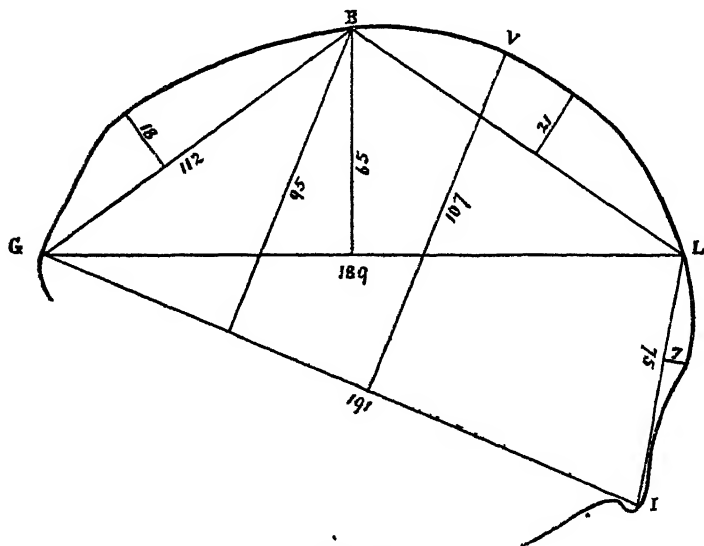


Fig. 52.

The glabello-inion-lambda angle is 78° in the Whangarei skull which is considerably larger than in the Neanderthal type and *Pithecanthropus*, and is within the limits of Australian and Tasmanian skulls. The index of frontal curvature, measured for comparison by Klaatsch's method, is 16; of parietal curvature, 18.7; and of occipital curvature, 9.3—all of these being within the limits of Australian aboriginal skulls.

The angle of the bregma, the size of which is looked upon as an important indication of specialisation, is 59° . In the Neanderthal type it is from 45° to 47° ; in *Pithecanthropus* it is 41° ; among Europeans it is 54° to 64° ; in Tasmanians, 54° to 59° ; and in Australian aboriginals from 51° to 62° . The index of the

height of the bregma is 49·7, and the index of the height of the vertex is 56; but in connection with these somewhat low figures the great length of the glabella-inion line has to be taken into account.

Scott's records shows that of seventy-six Maori skulls measured by him 43·4 per cent. were dolichocephalic. Three had cephalic indices under 70, viz., 69·9, 69·6, and 69·1. None were so low as in this Whangarei skull. The vertical indices of those three were 72, 68 and 70·1 respectively. In none of the three was the absolute height so great—being 134, 132 and 136mm. respectively. Investigations by Flower and Turner bear out Scott's figures regarding Maoris. The vertical index of the Whangarei skull is probably 77·4, much higher than the average of the Auckland skulls measured by Scott and of the Whangarei skulls measured by Flower, although within the range found in other Maori skulls possessing a higher cephalic index.

The vault corresponds generally with what is not unusual in Maori skulls, being rafter-shaped with a median ridge and showing a flattening of the parietal region between the ridge and the eminences, giving the skull, as has been noted, a pentagonal outline when viewed from behind. The sutures have the same characters as are found in Maori skulls, and the temporal ridges also run above the parietal eminences.

Of a total of fifty Moriori skulls examined by Scott and Duckworth, nine (*i.e.*, eighteen per cent.) are dolichocephalic. Maori skulls show about forty-three per cent. of dolichocephalic specimens. Scott found no Moriori skull with a cephalic index below 70; and among ten Cambridge specimens described by Duckworth the lowest was 73·1. In respect to this index and also to the great height compared with the width, the Whangarei skull differs greatly from the Moriori, although in some features there may be a resemblance.

One would certainly not expect to find such a skull as the Whangarei one among Morioris, and although it might possibly occur among Maoris its appearance would be somewhat phenomenal even in that race notwithstanding the mixed racial characters of the Maoris.

One must search elsewhere in order to find a race in which the members usually possess the cranial character exhibited by the Whangarei skull, viz., strongly dolichocephalic, with a high vertical index, the height being greater than the breadth, the cranial vault roof-shaped, the glabella and superciliary ridges fairly marked and the root of the nose not greatly depressed. Skulls with these characters well marked in the majority of the indivi-

duals have been described by Turner from the south and east of New Guinea, by the same writer from the Admiralty Islands, from the interior of Fiji by Turner and by Flower, and from New Caledonia by Turner and by Waterston. They have also been recorded from the Loyalty Islands. Recently by the courtesy of the Trustees of the Australian Museum in Sydney, I had the privilege of examining a collection of skulls from various parts of the South Seas, and in it I found a skull from Epi in the New Hebrides corresponding closely to this type (Pl. xxxiii.). Its measurements are given in the tables.

It has to be remembered that among the Sandwich Islanders, a distinctly Polynesian race, there is a dolichocephalic type as well as a brachycephalic type; but among the dolichocephalic specimens recorded by Turner the lowest cephalic index is 71—in fact the index is strangely constant, since in fifteen skulls it ranges from 71 to 74. This bears out the statement which is being found true in so many instances that in every primitive race one finds a dolichocephalic and a brachycephalic element co-existing. It will be apparent that there is little resemblance between the Whangarei skull and these Hawaiian specimens.

The Whangarei skull, in its resemblance to specimens from parts of New Guinea, the Admiralty Islands, the interior of Fiji, New Caledonia, the Loyalty Islands and the New Hebrides, is distinctly Melanesian, differing in this respect from the Polynesian type of Maoris and Morioris even when the mixed characters of these two races is taken into account.

Some reference is required to the relative length of the frontal and parietal arcs. So far as I can find, in the vast majority of skulls of Melanesians of pure race the parietal arc is longer than the frontal; but it sometimes occurs that the frontal is the longer, as is the case in the Whangarei skull.

One must admit the possibility of a "freak specimen" in any race; but if one were asked to classify the Whangarei skull from a consideration of its most obvious characters and without the knowledge that it was found in New Zealand one would almost certainly class it as the skull of a Melanesian, and would describe it as possessing certain well-marked primitive racial characters.

There is some evidence in support of the theory that the Melanesian or Negrito element, at a time prior to the Polynesian (Indonesian or Caucasian) emigration, spread over the whole of the South Seas. If any further remains resembling the Whangarei skull were found in New Zealand there would be fairly strong evidence that the members of the Melanesian race had reached that land if they had not actually peopled it.

Table I.

Dimensions.	Whangarei.	Moriori.		Maori.				Fijian.	New Caledonian	Ept.
		"A."	"B."	1	2	3	4			
Frontal longitudinal arc	136	120	118	121	123	123	124	122.75	131	125
Nasio-bregmatic distance	119	111	109	110	112	108	111	110.25	—	115
Index of frontal curve	21	20.7	18.3	18.1	21.4	21.3	21.6	20.6	—	16
Frontal curvature angle-degrees.	134	136	138	140	134	132	133	134.75	—	146
Stephanic diameter	100	102	106	114	103	100	98	103.75	104	93
Greatest breadth	128	131	144	134	135	133	130	133	130	120
Minimum frontal diameter	91	93	94	94	92	92	91	92.25	90	85
Frontal index	71	70.9	65.2	70.1	68.1	69.1	70	69.3	69.2	70.8

Table II.

Measurements.	When garel.	Moriol.		Maori.				Fijian.	New Caledonian	South Australian (Stuttgart)	Epi.
		"A."	"B."	1	2	3	4				
Capacity	—	—	—	—	—	—	—	—	1,300	1,450	—
Glabello-occipital length	191	184	182	183	186	160	175	183	193	192	190
Minimum frontal width	91	93	94	95	92	93	90	89	90	93	85
Stephanic breadth	100	102	106	114	103	100	98	97	104	—	93
Asterion breadth	103	116	106	103	102	108	105	99	107	—	119
Greatest width	128	130	142	133	130	134	130	128	130	130	120
Cephalic index	67	70.6	78	76.2	69.8	83.7	74.2	69.9	67	67.7	63.1
Horizontal circumference	513	510	505	500	504	480	490	496	525	538	513
Frontal arc	136	120	118	121	123	123	124	128	131	134	125
Parietal arc	133	116	120	120	125	110	115	130	147	125	143
Occipital arc	111	124	120	117	112	102	116	101	128	128	110
Total arc	380	360	358	358	360	335	335	359	406	387	378
Glabello-inion arc	330	290	315	287	311	276	293	310	—	308	325
Glabello-inion length	191	174	174	179	181	165	171	177	—	192	186
Glabello-lambda length	180	173	182	181	181	165	171	180	—	185	185
Greatest length	191	184	183	183	181	167	176	183	—	192	190
Basal-bregmatic height	148(?)	132	128	131	131	132	136	128	143	138	134
Vertical index	77.4(?)	71.7	70.3	71.5	70.4	82.5	74.2	69.9	74.0	71.8	70.5

Table III.

Crania.	A	B	C	D
	Glabello-inion length	Height of bregma above A	Height of bregma above glabello-lambda line	Height of vertex above glabello-inion line.
Whangarei	191	95	65	107
Mori "A"	174	85	58	99
Mori "B"	173	90	52	108
Maori 1.	179	83	59	93
Maori 2.	180	90	63	102
Maori 3.	165	77	62	82
Maori 4.	171	90	64	98
Fijian	177	89	66	100
South Australian (Stuttgart)	192	86	62	94
Epi.	186	91	1	102

THE RESULTS OF DEEP-SEA INVESTIGATIONS IN THE
TASMAN SEA.

I.—THE EXPEDITION OF H.M.C.S. "MINER."

No. 5.—POLYZOA SUPPLEMENT.*

By C. M. MAPLESTONE.

(Plates xxxiv. xxxv.)

I have now completed the examination of the rest of the Polyzoa in the collection forwarded to me by Prof. Haswell.

Unfortunately they are mostly in such a fragmentary and imperfect condition that it is impossible to satisfactorily determine the greater portion of them specifically, but I have been enabled to add to the list of known species in the collection the following:—

Amphiblestrum annulus, Manzoni, sp.

Hornera aircensis, Mapl.

Liripora lineata, McGil.

Fasciculipora gracilis, McGil

Heteropora pisiformis, McGil

Of these *Hornera aircensis* and *Heteropora pisiformis* have hitherto been recorded only as fossil from the Victorian Tertiary deposits. *Amphiblestrum annulus* is also found fossil in Victoria, but Dr. P. H. MacGillivray records it as living in the Falkland and Kerguelen Islands. The other two are living on the Victorian coasts.

In addition to these there are two specimens I had laid aside for special examination but overlooked when preparing my previous report, which are among the most interesting in the whole collection on account of the very long vibracula with which they are furnished. They are the following:—

SELENARIA FLAGELLIFERA, sp. nov.

(Plate xxxiv.).

Zoarium elliptical, 6.5 mm. long, 5 mm. wide; raised in the centre longitudinally. Zoecia irregularly hexagonal, rounded

* For Report on Polyzoa to which this is a Supplement see Rec. Austr. Mus., vii., 4, 1909, p. 267.

above; margins raised; imbricated. Thyrostome semi-elliptical (?). Vibracula 3 mm. long, curved, flexible.

Obs.—This is a very interesting form; the shape of the zoarium is unusual, not circular but elliptical with a longitudinal ridge in the centre. The membranous layer covers the whole surface so that the exact shape of the thyrostomes cannot be seen, they being hidden by the closed opercular; but the great peculiarity of the species is the (comparatively) enormous length of the vibracula, 3 mm.

SELENARIA FLAGELLIFERA, var. MINOR, var. nov.

(Plate xxxv.)

Zoarium flat, suborbicular. Zooecia elliptical or irregularly hexagonal; margins raised. Thyrostome semi-elliptical. Vibracula long and curved. Some of the marginal zooecia have inverted infundibular peristomes.

Obs.—The specimen from which this variety is described may possibly be a young form of *S. flagellifera*, as the zooecia are similar, also the vibracula, which however are not so long, but the peculiar inverted infundibular peristomes seen on six of the marginal zooecia justify not merely making it a variety but possibly considering it as a distinct species, for I have never seen this form of peristome in any *Selenaria*; it is however present in the marginal or basal zooecia of some *Biporæ*; it is not present in the specimen of *S. flagellifera*.

MINERALOGICAL NOTES: No IX.—TOPAZ, QUARTZ,
MONAZITE, AND OTHER AUSTRALIAN MINERALS.

By C. ANDERSON, M.A., D.Sc. (EDIN.), Mineralogist.

(Plates xxxvi.-xxxix.)

TOPAZ.

COW FLAT, NEAR TORRINGTON, NEW SOUTH WALES.

(Plate xxxvi., fig. 1.)

Three fine, isolated, colourless crystals, the largest measuring $1 \times 1.4 \times 1.6$ cm., have been recently added to the Museum collection; the exact locality is Meehan's Lease. The crystals, which have a pyramidal habit, are slightly waterworn, but the two which were measured gave fairly good signals.

ANGLES.

Forms		Measured.				Calculated. (Goldschmidt.)				Difference.	
		ϕ		ρ		ϕ		ρ		ϕ	ρ
<i>m</i>	110	62	6	90	0	62	8	90	0	2	0
<i>M</i>	230	51	35	89	58	51	35	"	"	0	2
<i>l</i>	120	43	26	90	0	43	25	"	"	1	0
<i>g</i>	130	32	28	90	0	32	14	"	"	14	0
<i>O</i>	560	57	42	—	—	57	37	"	"	5	—
<i>d</i>	201	89	58	60	48	90	0	61	0	2	12
<i>f</i>	021	0	4	43	33	0	0	43	39	4	6
<i>o</i>	221	62	7	63	46	62	8	63	54	1	8
<i>u</i>	111	62	16	45	41	62	8	45	35	8	7

The prism faces are in general vertically striated; on *m* (110) are raised rectangular markings (*wachstums-figuren*), similar to those described on the topaz of Carpet Snake Creek¹. Reflections were obtained from the sides of these markings, the average ϕ

¹ Anderson—Aust. Mus. Rec., vii., 1909, pl. lxxix., fig. 2.

angle being $64^{\circ}28'$. On g (130) are striations with $\phi = 29^{\circ}$, approximately. The form O (560) is represented by lines in m (110).

TATE RIVER, QUEENSLAND.

(Plate xxxvi., figs. 2-5.)

For the loan of these and other Queensland topaz described in this paper I am indebted to Mr. B. Dunstan, Government Geologist of Queensland.

The topaz of the Tate River was shortly described by G. vom Rath²; he found the forms m (110), l (120), f (021), y (041), d (201), o (221), but did not figure the crystals. The specimens which I have examined are small, averaging $.4 \times .6 \times .7$ cm; some are very well formed with smooth brilliant faces giving good reflections, the habit is either pyramidal (figs. 2, 3), or domal (fig 4). The terminal faces are etched progressively from the apex downwards, the base when present being quite dull; this seems to be a constant feature of worn topaz crystals. The form v (121), present on one crystal, I have not previously encountered on the numerous Australian crystals which have passed through my hands.

Below are the average co-ordinate angles obtained from the three measured crystals.

Forms		Measured		Calculated. (Goldschmidt)		Difference.	
		ϕ	ρ	ϕ	ρ	ϕ	ρ
c	001	—	—	—	—	—	—
m	110	62 9	90 0	62 8	90 0	1	0
M	230	51 39	„	51 35	„	4	0
l	120	43 26	„	43 25	„	1	0
π	250	37 12	„	37 7	„	5	0
q	130	32 12	89 59	32 14	„	2	1
d	201	—	60 57	90 0	61 0	—	3
h	203	—	30 44	„	31 2	—	18
f	021	0 0	43 39	0 0	43 39	0	0
y	041	0 0	62 20	„	62 20	0	0
o	221	62 9	63 53	62 8	63 54	1	1
u	111	62 8	45 33	„	45 35	0	2
i	223	62 0	36 0	„	34 14	8	1 46
v	121	43 46	52 48	43 25	52 42	21	6

²Rath—Sitz. Niederrh. Ges. Bonn, xliv., 1887, p. 291.

STANTHORPE, QUEENSLAND.

(Plate xxxvii., figs. 1, 2.)

The crystal shown in fig. 1 is from Spring Gully; it measures $4 \times 6 \times 1$ cm., and is clear and colourless. The terminal planes are much corroded and towards the apex even channelled. On the faces of $f(021)$ are elongated markings the blunt ends of which are directed towards the apex and the pointed ends towards $y(041)$; y is striated parallel to its intersection with f .

MEASURED AND CALCULATED ANGLES.

Forms		Measured				Calculated (Goldschmidt)				Difference	
		ϕ		ρ		ϕ		ρ		ϕ	ρ
b	010	0	1	89	57	0	0	90	0	1	3
m	110	62	8	90	1	62	8	"	"	0	1
M	230	51	22	90	1	51	35	"	"	13	1
l	120	43	21	90	2	43	25	"	"	4	2
d	201	90	32	61	21	90	0	61	0	32	21
f	021	0	3	43	47	0	0	43	39	3	8
y	041	0	1	62	16	"	"	62	20	1	4
o	221	62	13	64	10	62	8	63	54	5	16
v	111	62	14	45	58	"	"	45	35	6	23

Fig. 2 represents a crystal of which the locality is given as Stanthorpe simply. It is light blue in colour, domal in habit, and measures $1.2 \times 1.3 \times 1.8$ cm. It resembles somewhat the Stanthorpe crystal previously described in these Records³; probably these larger crystals belong to an older generation than does the Spring Gully specimen described above. The rectangular markings on $m(110)$ are very pronounced; the faces of $c(001)$ and $f(021)$ are much etched as shown in the figure; all the terminal planes are somewhat worn, and gave only approximately correct angles. The prism $n(140)$ is doubtfully present as striations in $y(130)$.

³Anderson—Rec. Austr. Mus., vii., 1908, p. 61, pl. xiii., figs. 3, 4.

MEAN ANGLES.

Forms		Measured		Calculated (Goldschmidt)		Difference	
		ϕ	ρ	ϕ	ρ	ϕ	ρ
<i>c</i>	001	—	—	—	—	—	—
<i>b</i>	010	0 39	90 2	0 0	90 0	39	2
<i>m</i>	110	62 7	90 0	62 8	„	1	0
<i>M</i>	230	51 35	89 59	51 35	„	0	1
<i>l</i>	120	43 23	90 0	43 25	„	2	0
<i>q</i>	130	32 16	„	32 14	„	2	0
<i>n</i>	140	25 54	89 59	25 19	„	35	1
<i>d</i>	201	90 0	61 0	90 0	61 0	0	0
<i>h</i>	203	—	32 25	„	31 02	—	1 23
<i>f</i>	021	0 9	43 10	0 0	43 39	9	29
<i>o</i>	221	62 16	63 44	62 8	63 54	8	10
<i>u</i>	111	62 4	45 49	„	45 35	4	14

LANCEWOOD TIN MINES, CHILLAGOE, QUEENSLAND.

(Plate xxxvii., fig. 3.)

This is a bluish crystal of domal habit measuring $1.3 \times 1.6 \times 1.5$ cm. It is simple with *f* (021), *m* (110) and *l* (120) largely developed; the faces of *b* (010), *M* (230), and *o* (221) are small. The prisms are strongly striated and *o* and *f* are much worn towards the apex.

TETRAHEDRITE.

HERCULES MINE, MT. READ, TASMANIA.

(Plate xxxvii., fig. 4.)

A hand specimen from this mine carrying crystallised tetrahedrite was lent to me for description by the late Mr. W. F. Petterd, of Launceston. The tetrahedrite, in minute but beautifully formed and brilliant crystals, occurs with rhombohedral calcite and siderite in small vughs of the country rock, which con-

tains veins and patches of chalcopyrite. The mineral was examined chemically and found to be normal tetrahedrite, containing copper, antimony and sulphur; no arsenic was detected but it may be present in slight amount as the quantity available for testing was very small.

Two crystals were measured; they show the tetrahedral development, the forms present being o (111), o , ($\bar{1}11$), d (110), n (211), r (332). One line face of the cube was observed. The crystals are of almost ideal symmetry as represented in the figure.

GYPSUM

MOUNT ELLIOTT, OLONCURRY, QUEENSLAND.

(Plate xxxvii., fig. 5.)

Since a short description of a crystal of selenite from this mine was published⁴, additional specimens have been obtained from Mr. W. T. Watkin Brown. Particularly fine are the groups of large, interpenetrating crystals, in the interstices of which are small well formed crystals, suitable for goniometric investigation. The large crystals seem to be without exception twinned on a (100) and elongated parallel to the c axis, while the smaller crystals are untwinned and elongated along the a axis, by one end of which they are usually attached.

Mr. W. H. Corbould, general manager of the mine, has kindly furnished me with the following particulars of the mode of occurrence. "The country rock is slate. The ore body in places is over one hundred feet wide. . . . At the 400 ft. level (No. IV.) the ore is primary sulphide and, judging by the way the ore makes at this level and the large vughs, it points to the copper being deposited through uprising waters. In all the vughs there is lime. . . . Between the Nos. II. and III. levels the ore has been altered in places and even at the present time there is a large amount of chemical action going on, as is noticed by the heat generated. It is between the Nos. II. and III. levels that the selenite is found, not always in vughs but at times in large deposits—one face I saw was quite twenty feet long by fifteen feet high of nothing but crystals. It was a great sight but I regret to say it was used as flux."

⁴Anderson—Rec. Austr. Mus., vii. 1909, p. 276.

Four crystals were measured; they are about $.5 \times .2 \times .2$ cm. and colourless and transparent as glass. Twelve forms were identified, the indices and angles being tabulated below.

Forms.		Measured.				Calculated (Goldschmidt.)				Difference	
		ϕ		ρ		ϕ		ρ		ϕ	ρ
<i>a</i>	100	89	59	89	59	90	0	90	0	1	1
<i>b</i>	010	0	0	90	0	0	0	„	„	0	0
<i>z</i>	310	77	12	89	59	77	11	„	„	1	1
<i>a</i>	210	71	11	90	0	71	11	„	„	0	0
<i>x</i>	320	65	32	90	1	65	35	„	„	3	1
<i>m</i>	110	55	45	90	0	55	44	„	„	1	0
<i>δ</i>	350	41	24	90	3	41	22	„	„	2	3
<i>h</i>	120	36	14	90	0	36	17	„	„	3	0
<i>k</i>	130	26	17	89	56	26	5	„	„	12	4
<i>l</i>	111	61	34	41	0	61	36	41	0	2	0
<i>n</i>	$\bar{1}11$	$\bar{4}7$	14	31	18	$\bar{4}7$	22	31	23	8	5
	$\bar{3}13$	$\bar{7}2$	57	25	6	$\bar{7}2$	57	25	10	0	4

The crystals have the following combinations (*iii* is figured).

Crystal.	<i>a</i>	<i>b</i>	<i>z</i>	<i>a</i>	ψ	<i>m</i>	<i>δ</i>	<i>h</i>	<i>k</i>	<i>l</i>	<i>n</i>
	100	010	310	210	320	110	350	120	130	111	$\bar{1}11$ $\bar{3}13$
i.	—	x	—	—	—	x	x	x	x	x	—
ii.	—	x	—	—	—	x	—	x	—	x	x
iii.	x	x	x	x	x	x	—	x	—	x	x
iv.	x	x	x	x	—	x	x	x	—	x	x

The largest faces are usually those of *m* (110) and *l* (111); some of the prism faces are slightly striated vertically; *n* is striated parallel to its intersection with *b*. The form $\bar{3}13$, of which two faces giving good signals were observed, has been previously recorded by Artini⁵ on the gypsum of Ballabio.

⁵Artini—Rend. R. Inst. Lomb., xxxvi., 1903. p. 1181 (*vide* Dana—2nd App., Syst. Min., 1909, p. 48.)

QUARTZ

MOONBI, NEW SOUTH WALES

(Plate xxxvii, fig. 6.)

Mr. D. A. Porter informs me that this fine example of a quartz crystal twinned on the Japan law (twinning plane ξ (11 $\bar{2}$ 2)) was found with several similar twins *in situ* at a depth of ten or fifteen feet about two and a half miles S.S.E. from Moonbi Railway Station. It has the usual flattened form of the Japan twin and the two segments are united in an irregular line; height 2 cm. For measurement each segment in turn was mounted in the conventional position to furnish the meridian and polar plane to which the poles of both segments were referred.

ANGLES.

Forms.		Measured.		Calculated.				Difference.			
		ϕ		ρ		ϕ		ϕ		ρ	
<i>m</i>	1010	0	0	89	59	0	0	90	0	0	1
<i>r</i>	10 $\bar{1}$ 1	0	0	51	49	0	0	51	47	0	2
<i>z</i>	01 $\bar{1}$ 1										
<i>n</i>	11 $\bar{2}$ 1	29	59	65	44	30	0	65	33	1	11
<i>m</i>	10 $\bar{1}$ 0	9	15	30	24	9	23	30	27	8	3
<i>r</i>	10 $\bar{1}$ 1	5	34	42	40	5	29	42	36	5	4
<i>z</i>	01 $\bar{1}$ 1	21	55	86	39	21	35	86	38	20	1

NUNDLE, NEW SOUTH WALES.

(Plate xxxvii, fig. 7.)

This Japan twin differs somewhat from the preceding. One segment is much larger than the other and above the junction (as figured) the larger segment tapers rapidly, while below it is of less diameter; height 2.7 cm. The apex of the smaller segment can be traced within the other but not distinctly. The twin is very similar to that from Dauphiné, described by Goldschmidt⁶.

⁶Goldschmidt—Zeits. Kryst., xlv., 1908, p. 415, pl. ix., figs. 2, 3.

HEFFERNAN'S LEASE, TORRINGTON, NEW SOUTH WALES

(Plate xxxviii.)

Here we have a large Japan twin in a group of untwinned crystals of quartz. It has the characteristic flattened form. Towards the bottom of the figure can be seen the impression of a crystal of beryl with prismatic striations, beryl being associated with quartz at this mine⁷.

WULFENITE.

JUNCTION MINE, BROKEN HILL, NEW SOUTH WALES.

Plate xxxix., figs. 1, 2.)

At this mine wulfenite occurs in small crystals, light red in colour, of about .3 cm. in diameter. Two somewhat different habits are recognisable as shown in the figures. Forms present are:—*c* (001), *m* (110), *g* (310), *k* (210), *e* (101), *n* (111). The prisms are not well developed, *m* being very narrow while *k* and *q* are very much rounded. When both *n* and *e* are present *e* is the larger and is dull with drusy appearance; *n* is bright and gives a good reflection. In every case there is apparently a horizontal plane of symmetry.

LEIGH CREEK, SOUTH AUSTRALIA.

At this locality small brown crystals of wulfenite are associated with galena. The crystals are very simple, *n* (111) being the only form present

MONAZITE.

KING'S BLUFF, OLARY, SOUTH AUSTRALIA.

(Plate xxxix., figs. 3-7.)

Monazite was found in October, 1906, in small veins and vughs in the quartzite at the King's Bluff gold mine⁸. It has also been obtained in the alluvial gold deposits of the same district. The Trustees recently acquired a collection of the crystallised monazite from Mr. Charles Bogenrieder, Mining Engineer. The crystals are about .5 cm. in greatest diameter, and of a

⁷ Anderson—Rec. Austr. Mus., vii., 1908, p. 62, 63.⁸ Brown—Record Mines S. Austr., 4th Edit., 1908, p. 362.

reddish brown colour. The faces are often wavy and imperfect, hence the signals are sometimes hazy and indistinct, and the readings obtained not good. Both simple and twinned crystals occur.

Four crystals were measured with results as tabulated below; the form λ (212) is new. The angles of c (001), n (120) and t ($\bar{2}12$) were obtained from single faces, of s (121) and λ from two faces. In addition to the seventeen forms enumerated there were observed on one crystal (No. I.) a single face each of what may be σ ($\bar{3}01$) previously observed on monazite from California Creek, Queensland⁹ (ρ obs = $67^{\circ}20$, calc. $69^{\circ}43$), and a new form ($\bar{3}02$) (ρ obs = $49^{\circ}26$, calc. $50^{\circ}55$). The crystal is apparently untwinned, but the supposed new face ($\bar{3}02$), which consists of small patches giving a fairly good signal, may possibly belong to the form w (101) (ρ = $50^{\circ}40$) of a twinned portion.

FORMS AND ANGLES.

Forms.		Measured.				Calculated. (Goldschmidt.)				Difference			
		ϕ		ρ		ϕ		ρ		ϕ		ρ	
		°	'	°	'	°	'	°	'	°	'	°	'
c	001	88	18	12	29	90	0	13	40	1	42	1	11
a	100	89	59	90	5			90	0		1		5
b	010	0	3	90	8	0	0				3		8
m	110	46	46	90	2	46	43				3		2
n	120	26	28	—		27	58			1	30	—	
w	101	89	52	50	37	90	0	50	48		8		11
x	$\bar{1}01$	89	40	36	27	90	0	36	29		20		2
e	011	14	39	43	35	14	43	43	44		4		9
r	111	53	2	56	35	52	57	56	56		5		21
s	121	34	17	67	18	33	31	65	45		46	1	33
t	112	57	53	40	42	57	47	40	58		6		16
λ	212	70	32	52	15	69	20	52	40	1	12		25
r	$\bar{1}11$	38	32	49	49	38	37	49	50		5		1
t	$\bar{2}12$	58	0	40	6	57	58	41	6		2	1	0
o	$\bar{1}21$	21	51	63	4	21	46	63	21		5		17
i	$\bar{2}11$	61	44	62	51	61	45	62	55		1		4
z	$\bar{3}11$	70	43	70	47	71	6	70	43		23		4

⁹Anderson—Rec. Austr. Mus., vii., 1909, p.281, pl. lxxxi., fig. 5.

The four crystals exhibited the following combinations (i. figs. 3 4 ; iii figs 5, 6):—

	<i>c</i>	<i>a</i>	<i>b</i>	<i>m</i>	<i>n</i>	<i>w</i>	<i>x</i>	<i>e</i>	<i>r</i>	<i>s</i>	<i>f</i>	λ	<i>v</i>	<i>t</i>	<i>o</i>	<i>i</i>	<i>z</i>
Cryst. 001	100	010	110	120	101	$\bar{1}01$	011	111	121	112	212	$\bar{1}11$	$\bar{2}12$	$\bar{1}21$	$\bar{2}11$	$\bar{3}11$	
i.	—	x	,	x	—	x	x	x	x	x	—	—	x	—	x	^	^
ii.	—	x	—	,	—	x	—	x	—	—	—	—	x	—	—	x	^
iii.	—	^	\	^	^	x	x	x	x	—	x	x	x	x	x	x	x
iv	x	\	—	x	—	x	x	^	x	x	—	—	x	—	x	x	x

EXPLANATION OF PLATE XXXII

CRANIAL REMAINS FROM WHANGCHU N°

- | | | |
|-------|-------------------------------------|------------------------------|
| Fig 1 | Partially restored portion of skull | side view |
| „ 2 | Do do | view from behind |
| „ 3 | Partially restored skull | to show median ridge |
| „ 4 | Do | to show upper orbital margin |
| „ 5 | Partially restored skull | to show frontal sinuses |



EXPLANATION OF PLATE XXXIII

Skull from Epi, New Hebrides, in the Australian Museum



EXPLANATION OF PLATE XXIV

— —

PORZOA

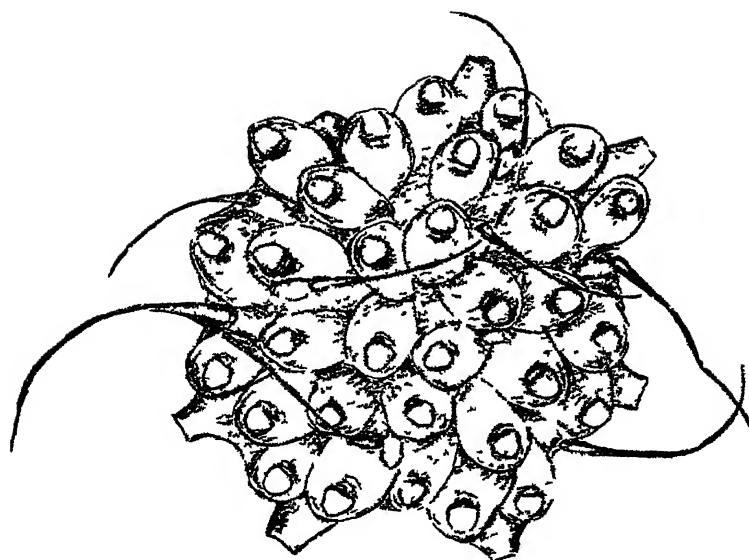
- Fig 1 Portion of *Selenaria flagellifera*— $\times 26$
2 Base of vibraculum and zooecia— $\times 40$
3 Photograph of whole zoarium— $\times 6$



EXPLANATION OF PLATE XXX

PLAZO

Selenaria flagellifera, var. *minor* — x 45



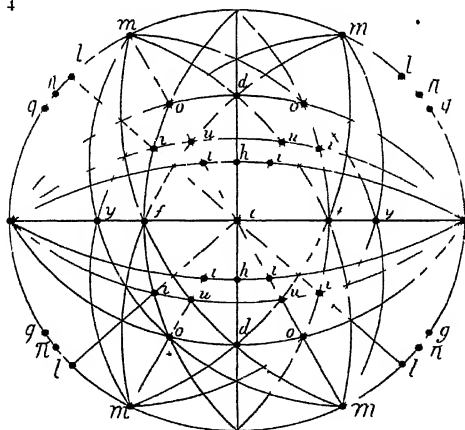
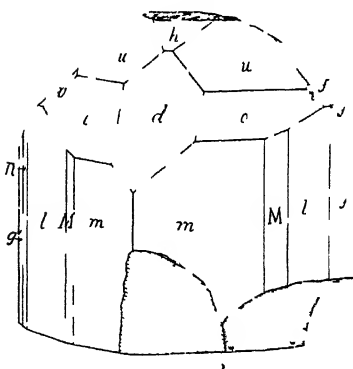
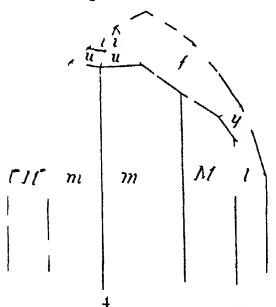
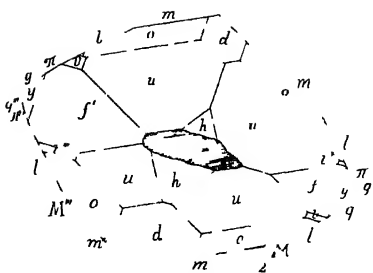
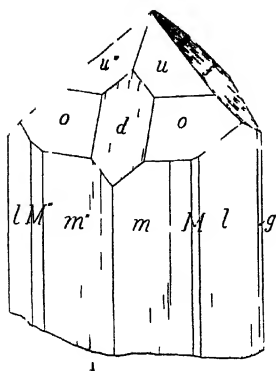
EXPLANATION OF PLATE XXXVI

10147.

Fig. 1. Meehan's Lease, near Torrington N.S. Wales

Figs. 2-5. Tate River, Queensland

Forms — c (001), m (110), M (230), l (120), π (250), y (130), d (201), h (203),
 t (021), g (041), o (221), u (111), v (223), i (121)



EXPLANATION OF PLATE XXXVII.

TOPAZ.

Fig. 1. Spring Gully, Stanthorpe, Queensland.

„ 2. Stanthorpe, Queensland.

„ 3. Lancewood Tin Mines, Chillingoe, Queensland.

Forms.— c (001), b (010), m (110), M (230), l (120), g (130), n (140), d (201),
 h (203), f (021), o (221), u (111).

TETRAHEDRITE.

Fig. 4. Hercules Mine, Mt. Read, Tasmania.

Forms.— o (111), o (111), d (110), n (211), r (332).

GYPSUM.

Fig. 5. Mt. Elliott, Cloncurry, Queensland.

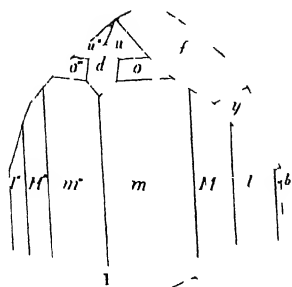
Forms.— α (100), b (010), γ (310), α (210), ψ (320), m (110), δ (350), h (120)
 k (130), l (111), n (111), (313).

QUARTZ.

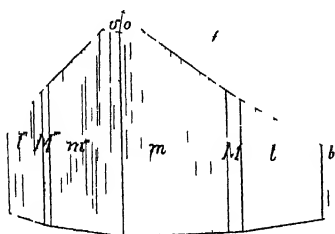
Fig. 6. Moonbi, N. S. Wales; twinned on ξ (1122) (Japan Law).

„ 7. Nundle, N. S. Wales do. (do.)

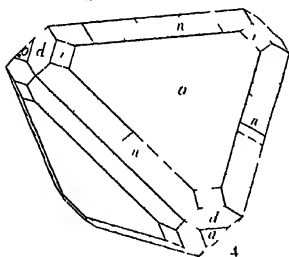
Forms.— m (1010), r (1011), z (0111), s (1121).



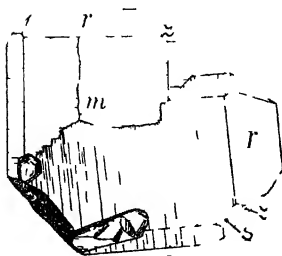
1



3



4



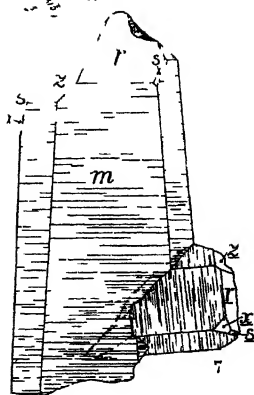
6



$u \parallel r \parallel m \parallel l$

$a \approx a \parallel m \parallel h$

$u \parallel r$



7

EXPLANATION OF PLATE XXXVIII.

QUARTZ.

Heffernan's Lease, Torrington, N. S. Wales; twinned on ξ (1122) (Japan Law).



EXPLANATION OF PLATE XXXIX.

WULFENITE.

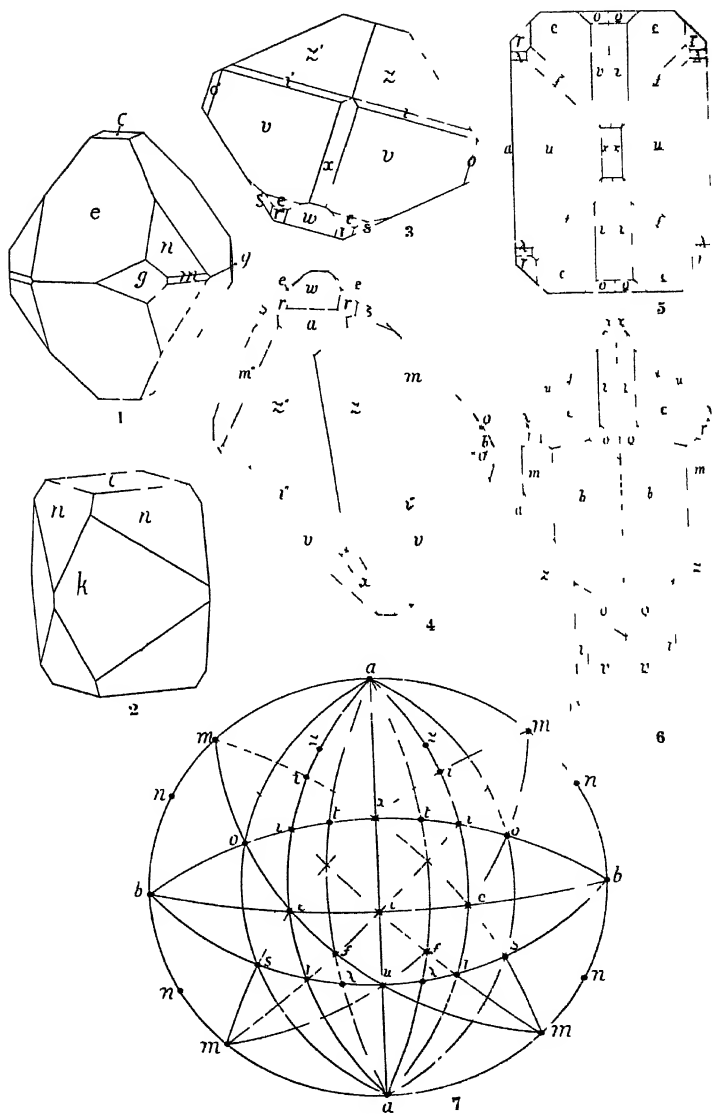
Figs. 1, 2. Junction Mine, Broken Hill, N. S. Wales.

Forms. - c (001), m (110), g (310), k (210), e (101), n (111).

MONAZITE.

Figs. 3 7. King's Bluff, Olary, S. Australia.

Forms. — c (001), a (100), b (010), m (110), n (120), w (101), x (101), e (011),
 r (111), s (121), f (112), λ (212), v (111), t (212), o (121), i (211)
 z ($\bar{3}11$).



DESCRIPTIONS OF SOME NEW OR NOTEWORTHY
SHELLS IN THE AUSTRALIAN MUSEUM.

By CHARLES HEDLEY, Assistant Curator.

(Plates xl.-xlv.)

NUCULA SUPERBA, Hedley.

(Plate xl, figs. 1, 2).

Nucula superba, Hedley, Austr. Mus. Mem. iv., 1902, p. 292.

In treating of *Nucula obliqua*, Lamarck, I suggested that whereas the type of that species had a smooth inner margin to the valve and was a native of Tasmania, the name had been in error applied to a much larger shell from tropical Queensland with an inner margin microscopically crenulated and with long rake-like teeth. For this Queensland form I proposed the name of *Nucula superba*.

The size and habitat of *Nucula loringi*, Adams and Angas¹, correspond to that of *N. superba*, but their phrase "margine intus simplice," is inconsistent. The crenulation of the inner margin of *N. superba* is only visible on good specimens and under a lens. But had it been overlooked by the authors, Mr. E. A. Smith would have referred to *N. loringi* in discussing the large Queensland *Nucula*².

Hab.—The example figured is 19 mm. long, 15 mm. high, the single valve 4 mm. deep; it was taken by Mr. A. U. Henn in 10½ fathoms near Bow Reef off Cape Sidmouth, North Queensland. I have obtained the species in 15 fathoms off the Palm Islands, in 5-10 fathoms Hope Islands, and in 4-14 fathoms Albany Passage, Queensland.

¹ Adams and Angas—Proc. Zool. Soc, 1863 (1864), p. 427; Cooke—Cambridge Natural History, Mollusca, 1893, p. 273, fig. 189A.

² Smith—Chall. Rep., Zool., xiii., 1885, p. 225.

MYODORA PAVIMENTA, sp. nov.

(Plate xl., fig. 3).

Shell transversely elongate, posteriorly truncate, thin, compressed. Colour uniform pearl gray, towards the umbo of the right valve are a few opaque radial streaks on a translucent ground. Right valve shallow, left slightly concave, especially round the margins. In both valves a broad posterior area is sharply defined. Ventral margin rounded, forming an obtuse angle at the intersection of the posterior ray, truncated end straight, broad, slightly oblique to the axis of the shell, forming a right angle with the posterior dorsal concave margin. Umbo acute, incurved. Anterior dorsal margin nearly straight, meeting the ventral margin in a blunt angle. Sculpture: a decided keel runs from the umbo to the postero-ventral angle. From this branch about a dozen widely spaced concentric ridges, similar to the radial, these gradually fade on the anterior side. On the left valve a furrow corresponds to the radial ridge. Length, 14; height, 8; depth of conjoined valves, 2 mm.

Hab.—I dredged three specimens alive in five fathoms, in Van Diemen Inlet, Gulf of Carpentaria. About five hundred and sixty miles to the north-north-west, the "Challenger" dredged an un-named species, closely related and perhaps identical with this^s. In 15 fathoms, off the Palm Islands, Queensland, I dredged several dead and mostly small specimens.

MYODORA TESSERA, sp. nov.

(Plate xl., fig. 4).

Shell large, thin, compressed, equilateral, sub-rhomboidal. Posterior dorsal margin concave, anterior dorsal margin straight in the young, convex in the adult. Colour uniform cream buff; both valves brilliantly nacreous within. Left perfectly flat, right very shallow. Sculpture: on both valves shallow, broad, irregularly spaced, concentric corrugations, abruptly limited by a posterior ray which is bordered in the flat valve by a

^s Smith—Chall. Rep., Zool., xiii., 1885, p. 66.

furrow, in the deep valve by a ridge. Continuous over all is a microscopically grained surface. Length, 36 ; height, 29 ; depth of single valve, 5 mm.

This fine species has some resemblance to *M. striata*, Quoy and Gaimard, from New Zealand. But that is more strongly sculptured, more solid, more inflated, and shorter in proportion to height.

Hab.—I collected several specimens of this on the beach at Mapoon and Karumba. At Mapoon I found also another apparently new species more compressed, more delicately sculptured, and with the posterior area less differentiated.

LORIPES ASSIMILIS, Angas.

Loripes assimilis, Angas, Proc. Zool. Soc., 1867, pp. 910, 926, pl. xlv., fig. 8.

Lucina (Loripes) jacksoniensis, Smith, Chall. Rep., Zool., xiii., 1885, p. 185, pl. xiii., fig. 11.

Both of these were described from Sydney Harbour; the discrepancy between the accounts may be reconciled if we considered that the single specimen used by Smith was worn but that Angas had fresh material. For good specimens show fine close concentric laminae but no trace, or hardly any, of radial lines. As wear of the shell proceeds, the lamellae go, and over the whole shell appear fine close radial lines, which are not surface sculpture, but opaque substance within the shell.

Mr. C. J. Gabriel with whom I have discussed the subject and who examined the types of each in the British Museum agrees with me that these names should be united.

Angas contrasted his *L. assimilis* with *L. icterica*, Reeve. No locality for that species was given by Reeve, and Mr. Gabriel was unable to find Reeve's type in the British Museum. I suggest that the Sydney shell which Angas rightly or wrongly took for *L. icterica* was that afterwards called *Lucina ramsayi* by Smith. In that case Angas used small examples, for in my experience *L. ramsayi* exceeds *L. assimilis* in size. It is also likely that the *L. icterica*, Reeve, which Melvill and Standen⁴ reported from Warrior Island was also *L. ramsayi*, as I found that species on Murray Island.

⁴ Melvill and Standen—Journ. Linn. Soc., Zool., xxvi., 1899, p. 200.

Among Australian collectors there has been a tendency to confuse *L. icterica* with *L. assimilis*. Thus Tenison Woods' remarks on *L. icterica*⁵ seem to refer to *L. assimilis*. Smith compares *Lucina jacksoniensis* to *L. parvula*, Gould⁶ also a Port Jackson species. But Pilsbry states⁷ that Gould's species does not differ from *L. pisidium*, Dunker. In this case Dunker's name must take precedence.⁸

ROCHEFORTIA EXCELLENS, *sp. nov.*

(Plate xl., figs. 5, 6, 7, 8).

Shell unusually large, oblong, twice as long as high, rather inflated, glossy, thin, translucent. Anterior side slightly longer. Ends rounded, dorsal margin arcuate. Ventral margin apparently straight, but on rigid examination a slight median insinuation is perceptible. Sculpture: external surface delicately concentrically striate. Under high magnification the dorsal area is finely shagreened and faint radial lines appear towards the median ventral margin. Inner ventral margin slightly finely crenulated. Inner part of pallial impression fimbriated. Length, 25; height, 13.5; depth of single valve, 4 mm.

This, one of the giants of its tribe, is readily distinguishable by size and shape.

Hab.—I gathered several specimens on the beach at Green Island, Queensland. I also found a single valve on the beach at Suva, Fiji.

EDENTTELLINA TYPICA, *Gatliff and Gabriel.*

Edenttellina typica, Gatliff and Gabriel, Proc. Roy. Soc. Vict., xxiv., (n.s.), 1911, p. 190, pl. xlv., figs. 5-6.

A new genus is here founded for a supposed bivalve with a spiral tip, in which neither cardinal nor lateral teeth, neither resilium, chondrophore, nor ligament, neither lunule nor escutcheon,

⁵ Ten. Woods—Proc. Roy. Soc. Tasm., 1877 (1879), p. 53.

⁶ Gould—Proc. Bost. Soc. Nat. Hist., viii., 1861, p. 36.

⁷ Pilsbry—Cat. Mar. Moll. Jap., 1895, p. 183.

⁸ Dunker—Malak. Blätt., vi., 1860, p. 227; *Id.*—Moll. Jap., 1861, p. 28, pl. iii., fig. 9.

neither adductor, pedal, nor pallial muscle scars are to be found. Its authors refer it to the Pelecypoda but not to any division or family. It is now suggested that no Pelecypod family would contain it, because it is the internal shell of some Tectibranch Gasteropod. *Edentellina* should be compared with such a shell as that of *Bouvieria stellata*, Risso, figured by Vayssiere.^{8a}

If so, it would be associated with such puzzles as *Thelidomus*, an insect larva case described by Swainson as a Gasteropod; *Allportia*, a Planarian described by Tenison Woods as a Nudi-branch; and *Amalthea coxi*, a barnacle described by Sowerby as a Gasteropod.

According to figure and description, the genus *Ludovicia*⁹ is very similar to *Edentellina*, and, if both were really bivalves, might serve to contain the Australian species.

MONTROUZIERA CLATHRATA, *Souverbie*.

Montrouziera clathrata, Souverbie, Journ. de Conch., xi., 1863, p. 282, pl. xii., fig. 5.

The genus *Montrouziera* was founded on a single species represented by a single specimen in the Bordeaux Museum. Souverbie proposed that it should be classified next to *Cumingia*. The species does not appear to have been again recognised, and for nearly fifty years no further information has appeared in literature. Subsequent writers, like Fischer and Tryon merely repeat the original matter.

From Mr. J. Brazier we lately obtained four specimens dredged in three fathoms in Mozelle Bay near Noumea, New Caledonia, the original locality. Except in being rather smaller, viz. 10 mm., these agree with Souverbie's excellent figure and description.

Their examination induces me to suggest transference of the genus from the Semelidæ to the Psammobiidæ. *Montrouziera* seems to me to be nearest to *Asaphis* but whereas *Asaphis* has

^{8a} Ann. des Sciences Naturelles., Ser. viii., Zool., viii., 1898, p. 306, pl. xx., figs. 84, 84.

⁹ Cossmann—Mém. Soc. Roy. Malac. Belg., xxii., 1887 (1888), p. 45, pl. ii., figs. 21-22.

two cardinal teeth in each valve, *Montrouzieria* has in the right valve a third cardinal additional, and posterior to the others.

CLANCULUS COMARILIS, *sp. nov.*

(Plate xl., figs. 9, 10, 11).

Shell solid, conical. Whorls, seven, parted by impressed sutures. Colour, white, clouded with pale brown, every third or fourth bead in every row picked out with dark madder-brown, giving a general effect of irregular dark radial stripes on a pale ground. Apex articulated with crimson. Sculpture: on the upper whorls are four gemmule rows, and part of a fifth is visible along the suture, the last whorl has twelve rows, of which seven are on the base. The gemmules are prominent, glossy, about fifty to a whorl, their breadth apart from row to row, but closer within the row. The anterior row of each whorl has larger and more crowded gemmules. The interstices between the rows are microscopically reticulated by spiral and oblique striæ. The aperture descends two gemmule rows. Within the base are four entering plications, otherwise the armature agrees with that of *C. unedo* and related forms. Height, 13; maj. diam., 10; min. diam., 8 mm.

The novelty is perhaps nearest to *Clanculus unedo*, A. Adams¹⁰, a species already reported from Australia by Messrs. Melvill and Standen¹¹. Adams' name is without locality or size and was in literature unrecognisable until Fischer¹² figured and redescribed it from New Caledonia. *C. comarilis* is distinguishable from the New Caledonian species by its narrower form and its colour both of hue and pattern. *C. unedo* has more ridges within the outer lip than *C. comarilis*. By its narrow elevated shape the novelty concludes a sequence from *C. clanguloides* to *C. stigmarius* to *C. unedo*.

Hab.—Palm Islands (type, C. Hedley); Barnard Islands (Dr. R. Pulleine); and Cooktown (J. O. Day), all in tropical Queensland.

¹⁰ A. Adams—Proc. Zool. Soc., 1851 (1853), p. 161.

¹¹ Melvill and Standen—Journ. Linn. Soc., Zool., xvii., 1899, p. 175.

¹² Fischer—Coquilles Vivantes, Trochus, 1880, p. 323, pl. 101, fig. 2.

MONODONTA DIMINUTA, *sp. nov.*

(Plate xli, fig. 12).

Shell small, solid, ovate-turbinate, dull and rough. Whorls five and a half, separated by impressed sutures. Colour very variable; entire maroon or entire slate or either with broad radiating stripes of buff, or the spirals articulated with buff on a maroon or slate ground, or combinations of these; the nacre of the interior of the aperture bordered with emerald. Sculpture: elevated spiral ridges, four or five on the upper whorls, about sixteen on the last, smaller and closer on the base, both ridges and interstices are obliquely crossed by fine growth striæ. Aperture subquadrate, brilliantly nacreous with a narrow border. Base of the columella externally expanded, internally bearing three small tubercles. Throat with about seven entering ridges which commence at the bevel within the lip, body whorl with a slight smear of callus. Height, 7; maj. diam., 7; min. diam., 6 mm.

As a dwarf form this represents within the Queensland tropics the *Austroclea* of temperate Australia.

Apart from the great difference in size, *M. diminuta* is distinguished by several tubercles at the base of the columella, where *M. zebra* and *M. constricta* have but one.

Hab.—I have collected this species on the beach at Mapoon (type), Sweers Island, Cape York, Cairns, Dunk, Hinchinbrook and Palm Islands. It was sent as from Port Curtis by Mr. J. Shirley, and from Thursday Island by Dr. C. G. Seligmann.

MINOLIA HENNIANA, *Melvill.*

(Plate xli, figs. 13, 14, 15).

Minolia henniana, Melvill, Journ. of Conch., vi., 1891, p. 410, pl. ii., fig. 14.

The type of this species was obtained at Magnetic Island, near Townsville, Queensland. The figure of it is rough, the description brief and it is therefore not easy to identify. Not without hesitation I assign here a species which I collected at several places in the Gulf of Carpentaria, Mapoon, Van Diemen Inlet, Sweer Island and Mornington Island, a specimen from the last

being figured herewith. It is 4 mm. in major diameter but has five whorls, as is usual in the genus, not four as is ascribed to *M. henniana*. A microscopic sculpture of fine radial threads over-run the spirals and are more apparent on the base. In colour it is variable, the figured example has walnut-brown radial flames on a grey ground, in others the flames are brick red and in some the flames break up into small chequers.

LARINA (?) TURBINATA, Gatliff and Gabriel.

Larina (?) turbinata, Gatliff and Gabriel, Proc. Roy. Soc. Vict., xxii., (n.s.), 1909, p. 35, pl. xiii.

Under this title was described a mollusc dredged alive in five fathoms in Western Port, Victoria. The same species was subsequently procured by Mr. W. L. May in forty fathoms off Schouten Island, Tasmania.¹³

Though first described from "Moreton Bay," Mr. E. A. Smith shows that *Larina* is related to *Vivipara* and is "undoubtedly a fresh water form." In rebuttal Messrs Gatliff and Gabriel suggest that tidal influence might prevail in the Mackenzie River, Queensland, at the spot where typical *Larina* occurred. Unfortunately for this argument the Mackenzie flows not into the sea, but into the Fitzroy more than a hundred miles from marine influence. Another species of *Larina* was discovered by D'Albertis in the Upper Fly River, British New Guinea.

Pictures of the two shells look alike, but actually *L. turbinata* has but superficial resemblance to the real *Larina*. Though destructive criticism of this classification is easy, constructive work of correctly placing the Victorian shell is hard. With happier treatment the radula and operculum might have directed us to its natural position. But the operculum was lost, the radula left undescribed and figured as a featureless blur.

Failing the introduction of a new genus I would suggest for the reception of *L. (?) turbinata*, Pfeffer's Antarctic genus *Pellilitorina*.¹⁴ To this belong *P. setosa*, Smith, from Kerguelen, and *P. pellita*, Martens, from South Georgia.

¹³ May—Proc. Roy. Soc. Tasn., 1910, p. 308.

¹⁴ Pfeffer—Jahrb. Hamb. Wiss. Anst., iii., 1886, p. 77, pl. 3, figs. 6, 7.

Amauropsis (?) *rossiana*, Smith,¹⁵ from McMurdo's Sound appears akin. Somewhat similar features are presented by the Antarctic genera *Neoconcha*, Smith, and *Trichoconcha*, Smith.

Probably *Amauropsis morchii*, Adams and Angas¹⁶ should accompany these in a transfer to *Pellilitorina*.

ALVANIA PRÆTORNATILIS, *sp. nov.*

(Plate xli, fig. 16).

Shell solid, conical, glossy, narrowly perforate, periphery angled, shoulder smooth steeply sloped, base sculptured. Colour uniform dull white. Whorls five parted by deeply channelled sutures. Sculpture: first whorl and a half with about six uniform equidistant spiral threads, vanishing on latter whorls, which have the shoulder smooth, periphery girt with prominent double keel, and base with five feebler spirals. Umbilicus a narrow furrow. Aperture entire subcircular, outer lip much thickened. Height, 3; breadth, 1.6 mm.

This nearest approaches *Rissoa imbrex*, Hedley,¹⁷ in which the spire whorls are more exsert, though of similar sculpture. The novelty is shorter, broader, more solid and has the base spirally ridged, whereas in *R. imbrex* it is smooth.

Hab.—The species is represented by a single specimen dredged in November, 1880, in 35 fathoms off Broughton Island, Port Stephens, N. S. Wales. It is recorded on p. 21 of the Annual Report of this Museum for 1881 as "*No. 62 Rissoa, sp. nov.*"

RISSOINA CARPENTARIENSIS, *sp. nov.*

(Plate xlii, fig. 20).

Shell small, solid, ovate. Colour: the beachworn specimens before me are white. Whorls five, rapidly increasing. Sculpture: stout projecting spiral ribs parted by interstices of equal breadth, of these the body whorl has seven to nine, the penultimate four,

¹⁵Smith—Nat. Antarctic Exp., iii., Moll., 1907, p. 5, pl. 5, fig. 6.

¹⁶Adams and Angas—Proc. Zool. Soc., 1863, p. 423; Hedley—Proc. Linn. Soc. N. S. Wales, xxvi., 1901, p. 700, pl. xxxiv., figs. 19, 20.

¹⁷Hedley—Proc. Linn. Soc. N. S. Wales, xxx., 1908, p. 469, pl. x., fig. 33.

the antepenultimate three. A heavy funicle runs round the basal axis into the varix. Aperture perpendicular elliptical, bordered by a singularly prominent varix. Length, 3·4; breadth, 2·1 mm.

The small size, strong spiral sculpture, and absence of emargination on the anterior lip, characterise this eccentric species.

Hab.—I gathered a few specimens on the beach at Mornington Island, Gulf of Carpentaria, Queensland.

Rissoina rhyllensis, Gatliff and Gabriel.

Rissoina rhyllensis, Gatliff and Gabriel, Proc. Roy. Soc. Vict., xxi., 1908, pp. 367, 379, pl. xxi., fig. 8.

Rissoina fausta, Hedley and May, Rec. Austr. Mus., vii., 1908, p. 117, pl. xxii., fig. 10.

After interchange of specimens, it has been mutually agreed that these names refer to the same species. That of *R. rhyllensis* enjoys a few days precedence over *R. fausta*. The species was simultaneously observed by Dr. Verco in South Australia.¹⁸

POTAMOPYRGUS RUPPIÆ, sp. nov.

(Plate xli., fig. 17).

Shell small, rather thin, oblong ovate, narrowly perforate. Colour sometimes uniform brown, or buff or olive, more frequently ground colour olive-buff with two cinnamon bands, one at the horizon of the lip insertion, another midway between that and the suture. Whorls four rounded. Surface smooth, but faint keels are sometimes and irregularly developed. Aperture simple entire, rounded below and angled above; columella margin a little reflected, inner lip considerably thickened in the adult. Length, 2·15; breadth, 1·3 mm.

This is related to the Victorian *P. buccinoides*, Quoy and Gaimard¹⁹ but is smaller, proportionately broader, less tightly coiled with fewer whorls.

¹⁸ Verco—Trans. Roy. Soc. S. Austr., xxxii., 1908, p. 841.

¹⁹ Quoy and Gaimard—Voy. Astrolabe, Zool., iii., 1834, p. 175, pl. 58, figs. 13-15.

Hab.—Type from brackish water in Deewhy Lagoon a few miles north of Sydney. Here I found the species living in abundance on the thread-like foliage of a plant which Mr. J. H. Maiden has kindly identified for me as *Ruppia maritima*, Linl.e. It was associated with *Tatea rufilabris*, A. Adams, *Salinator fragilis*, Lamarck, and *Modiola subtorta*, Dunker. The shell was also taken in the neighbouring lagoon of Freshwater by the late Mr. F. E. Grant. I have also seen it in a mangrove swamp in Lane Cove, Port Jackson.

CROSSEA GEMMATA, *sp. nov.*

(Plate xli., fig. 19).

Shell rather large, thin, pellucid. Colour uniform white. Whorls four and a half, rounded, last whorl descending, almost free finally. Sculpture: protoconch of a whorl and a half small and smooth, on the following whorls about half a dozen small sharp spiral keels whose interstices are latticed by radial ribs, these latter fade gradually away. On the body whorl the spirals amount to about thirteen, broad flat smooth interstices separate narrow sharp erect ridges. The crest of each spiral is beset with a row of very minute and crowded beads, about eighty to a whorl. Aperture subcircular, the outer lip fimbriated by the ends of the spirals. A funicle represented by the innermost spiral running out to the anterior angle of the lip. Umbilicus deep and narrow. Length, 3·75; breadth, 3·5 mm.

No other species in the genus has beaded ribs, though in cancellate sculpture *C. concinna*, Angas, and *C. cancellata*, Ten. Woods, make an approach.

Hab.—I collected a single specimen on the beach at Mapoon, Gulf of Carpentaria.

COUTHOUYIA ASPERA, *sp. nov.*

(Plate xli., fig. 18).

Shell ovate-acuminate, thin. Colour white. Whorls six, rapidly increasing, gradate, last descending almost uncoiled. Sculpture: last whorl with about twenty-five fine spiral sharp-equal threads, decussated by fine radial threads which latterly

and especially towards the base become evanescent. On the upper whorls radial lamellæ predominate and the spirals gradually disappear. Aperture D-shaped, guttered at the anterior angle, whence a serrate crested funicle winds into the umbilicus. Umbilicus sub-cylindrical, deep, narrow, longitudinally striate within by growth lines, overhung by the curled margin of the columella. Length, 5.3; breadth, 3.5 mm.

This is intermediate between the two Australian species already known, being less rough than *C. aculeata*, Hedley,²⁰ but rougher than *C. gracilis*, Brazier.²¹ Apparently *C. thelacme*, Melvill²², from the Persian Gulf is also related.

Hab.—I obtained a few specimens of this species in 17-20 fathoms off Masthead Island, Capricorn Group, Queensland.

VANIKORO SIGARETIFORMIS, Potiez and Michaud.

(Plate xlii., figs. 21, 22).

Velutina sigaretiformis, Potiez and Michaud, Galerie Moll. Douai, 1838, p. 508, pl. xxxv., figs. 21, 22.

Narica sigaretiformis, Recluz, Mag. de Zool., 1845, p. 55, pl. cxxxii., fig. 3.

The *Vanikoro* which is commonest in Sydney Harbour appears to me to be *V. sigaretiformis*, Potiez and Michaud. Mr. E. A. Smith is of the opinion that the *V. recluziana*, Adams and Angas, described²³ from Sydney should be united to it.

In the genus *Vanikoro* it is frequent that earlier whorls carry comparatively prominent radial ribs, which at a certain stage cease abruptly and are succeeded by an entirely different scheme of delicate spiral threads. These diversely ornamented upper whorls appear to afford the most tangible features for specific differentiation in this difficult group. So sudden and complete is the change that observers have failed to connect the young with

²⁰ Hedley—Proc. Linn. Soc. N. S. Wales, xxv., 1900, p. 89, pl. iii. fig. 10.

²¹ Brazier—Loc. cit., p. 508, pl. xxvi., fig. 13.

²² Melvill—Proc. Malac. Soc., vi., 1904, p. 54, pl. v., fig. 20.

²³ Adams and Angas—Proc. Zool. Soc., 1863, p. 424.

the adult of the same shell. Thus Dr. Verco concluded that his *Vanikoro denselaminata* was the young state of *Adeorbis vincentiana*, Angas.²⁴

To make clear the change which *V. sigaretiformis* undergoes, I present drawings of one specimen 3.5 mm. in diameter and of another 7 mm. in diameter, the species finally reaching a diameter of 11 mm.

Mr. Smith explains²⁵ that the adult shell of *V. expansa*, Sowerby, is unrecognisable from the figure and description of the immature type. This species has as yet only been recorded from North West Australia. The additional information now available leads me to identify as *V. expansa* a shell widely distributed in Queensland, which I collected on the beaches at Mapoon, Karumba, and Forsyth Island, Gulf of Carpentaria, dredged in 7-10 fathoms at Port Curtis, and received from Caloundra.

As far as my experience goes, *V. cancellata* is restricted to the coral reefs, and in Queensland *V. expansa* replaces it in the muddy water of the mainland coast.

Nerita cancellata, Chemnitz, on which Lamarck founded his *Sigaretus cancellatus* is quite different from the species which Herman had previously and regularly described as *Nerita cancellata*.²⁶

Mr. E. A. Smith in the paper above cited, transfers to *Vanikoro Adeorbis vincentiana*, Angas. Two other species should accompany this, viz. *Adeorbis angasi*, A. Adams,²⁷ and *A. angulata*, Hedley²⁸.

These three appear to constitute a distinct section of the genus.

SYRNOLA MANIFESTA, *sp. nov.*

(Plate xlii., figs. 23, 24).

Shell rather large, elongate conical, solid, smooth and glossy. Colour uniform milk white. Adult whorls, ten, tapering, gradually increasing, each with a narrow but sharp step at the

²⁴ Verco—Trans. Roy. Soc. S. Austr., xxxiv., 1910, p. 118.

²⁵ Smith—Proc. Malac. Soc., viii., 1908, p. 109.

²⁶ Herman—Naturforscher, xvi., 1781, p. 56, pl. ii., figs. 8, 9.

²⁷ Adams—Proc. Zool. Soc., 1863, p. 424, pl. xxxvii., figs. 11, 12.

²⁸ Hedley—Rec. Austr. Mus., vi., 1905, p. 50, fig. 15.

summit. Protoconch small, slightly immersed, half turned over, of an involute whorl and a half. Aperture pyriform, broadly rounded below, constricted above. Columella margin reflected. Plication prominent, entering obliquely. Beneath it a narrow axial crevice. Length, 15.5; breadth, 4.5 mm.

This appears near to a South Australian Pleistocene fossil, *Syrnola jonesiana*, Tate.²⁹ I have no specimen of the fossil for comparison, it is of smaller size with fewer whorls.

Hab.—A single specimen (the type) from the Six Mile Beach, Port Stephens, N. S. Wales, was obtained from Mr. J. Brazier. Three others were collected by Mr. C. Laseron at Trial Bay, N. S. Wales.

ODOSTOMIA REVINCTA, sp. nov.

(Plate xlii., fig. 25).

Shell small solid, sub-cylindrical imperforate. Colour uniform buff. Whorls two and a half, exsert, procumbent nuclear whorls and three adult whorls parted by deeply channelled sutures. Sculpture massive, on each whorl a chain of beads, about fourteen to a whorl, above a simple solid peripheral rib. On the base five spiral keels diminishing in descending order. Aperture obliquely pyriform. Length, 1.35; breadth, 0.65 mm.

This species appears to belong to the sub-genus *Miralda*.³⁰ Its striking sculpture readily distinguishes it from kindred forms. To *Miralda* should also be transferred the Queensland shells I described as *Pyrgulina umeralis*, *P. zea* and *P. senex*.

Hab.—I obtained two specimens in 15 fathoms off the Palm Islands, Queensland.

CHILEUTOMIA CORALLINA, sp. nov.

(Plate xlii., fig. 26).

Shell minute, sub-cylindrical, thin, smooth and glossy. Colour white. On the decollated specimen under examination, five whorls remain, these increase rapidly and are parted by impressed

²⁹ Tate—Trans. Roy. Soc. S. Austr., xxii., 1898, p. 70, p. 83, text fig.

³⁰ Dall and Bartsch—Bull. U. S. Nat. Mus., 68, 1908, p. 176.

sutures. On each side ascend a series of nearly continuous varices, which cause the shell to appear slightly compressed from back to front. Aperture pyriform, outer lip advanced peripherally, columella margin thickened. Length, 2.25; breadth, 0.65 mm.

Compared with *C. anceps*, Hedley,³¹ the novelty has less developed varices and is much smaller and more slender.

Hab.—A single specimen was taken by Mr. A. U. Henn, in 10½ fathoms near Bow Reef, off Cape Sidmouth, North Queensland.

SCAPHELLA MOSLEMICA, sp. nov.

(Plate xliii., figs. 29, 30).

Shell small, thin, ovate-fusiform. Whorls three besides a protoconch of three and a half whorls. In the adult the spire whorls are coated with thick opaque callus. Colour cream to salmon buff, longitudinally painted by about a dozen deeply sinuate narrow cinnamon lines. Columella with four plications, between the upper pair an interstitial thread sometimes occurs. Length, 55; breadth, 25 mm.

The novelty is closely related to *S. undulata*, Lamk., which it represents and replaces in deep water, and from which it differs by being a smaller thinner shell with a smaller protoconch and having the spire whorls wrapped in a white sheet of callus. The Tertiary fossil, *Voluta masoni*, Tate,³² approaches in form and size but differs in colour pattern.

Hab.—East of Sydney in 250 fathoms, off Wollongong in 100 fathoms, 80 fathoms 22 miles east of Narrabeen, (C. Hedley); and deep water between Gahoe and Flinders Island (Mr. H. C. Dannevig).

MARGINELLA GEMINATA, sp. nov.

(Plate xlii., fig. 28).

Shell biconical, glossy, solid, and opaque in the old, thin and translucent in the young. Colour uniform white. Whorls four, flattened above the shoulder, contracted at the base. After

³¹ Hedley—Proc. Linn. Soc. N. S. Wales, xxv., 1900, pp. 90, 505, iii., figs. 5, 6, 7.

³² Tate—Trans. Roy. Soc. S. Austr., xi., 1889, p. 128, pl. iii., fig. 9.

maturity the spire is overspread with a callus sheet obscuring the sutures. Another and thicker layer is extended on the body-whorl in advance of the aperture. Aperture narrow, anteriorly subrostrate, posteriorly channelled and ascending the previous whorl. Outer lip with a thick varix externally and about ten evenly spaced small denticules internally. Columella with four strong elevated folds, the posterior horizontal about half way along the aperture, the anterior running into the margin of the subrostrate extremity. Length, 6; breadth, 4 mm.

In size, shape, colour and general appearance *M. geminata* closely resembles *Marginella laevigata*, Brazier,³³ from Torres Strait and New Guinea. At first acquaintance of *M. geminata* I figured it and considered it a variety of *M. laevigata*.³⁴ On reconsideration the differences though slight are found to be constant and, supported by a very different habitat, are believed to justify specific independence.

M. laevigata has a narrower aperture, taller spire, less angled spire whorls, the varix more wing-like and has more and closer denticules within the outer lip. It also inhabits very warm water but its twin lives in cold water. *Marginella baudinensis*, Smith,³⁵ from tropical West Australia appears to be identical with Brazier's species. To assist comparison I now re-figure both species, *M. laevigata* (Pl. xlii., fig. 27) from Torres Strait and *M. geminata* (Pl. xlii., fig. 28) from 100 fathoms off Wollongong, N. S. Wales.

Hab.—*M. geminata* is characteristic of the continental shelf, ranging from 25 to 250 fathoms and from Cape Byron in the North to Tasmania in the south. Under the wrong name of *M. laevigata* I have already reported it from several localities. In this Museum it is represented as follows:—100 fathoms off Wollongong (type); 80 fathoms off Narrabeen; 250 fathoms off Sydney (C. Hedley); off Cabbage Tree Island (Museum Expedition of 1880); 111 fathoms off Cape Byron (G. H. Halligan); Westernport, Victoria (C. J. Gabriel); 63-75 fathoms Port Kembla (figured in 1903); 40-50 fathoms Cape Three Points; 54-59 fathoms Wata Mooli; 50-52 fathoms Botany Heads (Thetis Expedition); 40 fathoms off Schouten Island, Tasmania (W. L. May).

³³ Brazier—Proc. Linn. Soc. N. S. Wales, i., 1877, p. 225; Hedley—Rec. Austr. Mus., iv., 1901, pl. xvi., fig. 5.

³⁴ Hedley—Austr. Mus. Mem., iv., 1903, p. 365, fig. 89.

³⁵ Smith—Proc. Malac. Soc., iii., 1899., p. 208, fig. 2.

DUPLICARIA VALLESIA, *sp. nov.*

(Plate xliii., fig. 31).

Shell elongate-subulate, glossy, rather thin. Colour: a median cream band between pale orange on the upper half of the whorl and on the base, six summit whorls dark orange. Whorls fourteen, including a two whorled turbin ate protoconch. Sculpture: a deep furrow winds along the upper third of each whorl. Straight rather oblique riblets, discontinuous from whorl to whorl, parted by wider interstices, about eighteen to a whorl, are well developed at the suture, interrupted by and reform below the sulcus, and fade at the periphery. Between the ribs appear under a lens a few faint spiral threads. Aperture small, narrow, deeply notched anteriorly. Length, 27; breadth, 6 mm.

On account of anatomical characters detailed by Troschel, Dr. W. H. Dall ranked the species grouping round *Buccinum duplicatum*, Linne, as an independent genus of the Terebridae, under the name of *Duplicaria*.³⁶ This primitive group is well developed in Australia. Among local species, *D. ustulata*, Deshayes, is comparable to the novelty in size and shape. It is however more solid, of a uniform colour with finer and more numerous ribs.

Hab.—Trial Bay, N. S. Wales, several specimens collected by Mr. Carl Laceron and presented by the Curator of the Technological Museum, Sydney.

CONUS MICARIUS, *sp. nov.*

(Plate xliii., fig. 32).

Shell small, conical, spire a third of the total length. Whorls six and a half, parted by a channelled suture. Colour variable, opaque white bosses, ten to a whorl, are wreathed round the summit of the last whorl and ascend the spire, where they are frequently underlined by brown. Another opaque white band often occupies the middle of the body whorl and may be flanked above and below by translucent fawn belts, leaving the anterior end white. Or below the persistent white shoulder zone the

³⁶ Dall—*Nautilus*, xxi., March, 1908, p. 124, and *Bull. Mus. Comp. Zool.*, xliii., 1908, p. 245.

remainder may be mottled with opaque white and fawn, or upon such a ground there may run interrupted spiral lines of chocolate. Sculpture: below the opaque shoulder band, about sixteen raised spiral threads surround the shell and penetrate the aperture. Length, 6; breadth, 3.5 mm.

But for *C. parvus*, Pease, this would be the smallest of its family. Pease has given little information of the Hawaiian shell, but, judging from Langkavel's³⁷ figure, the Australian shell appears to differ by a shorter spire, absence of radial sculpture and presence of opaque ocelli. Pease's species is considered by Pace³⁸ to be a member of the "*Columbella dormitor* group."

Hab.—Beach near Cable Station, about fifteen miles south-west of Cape York—type (Hedley); Prince of Wales Island (Froggatt); Murray Island (Hedley and McCulloch).

DAPHNELLA VERSIVESTITA, sp. nov.

(Plate xliii., fig. 33).

Shell large, rather thin, elongate conic, earlier whorls angled, last rounded. Colour cream with a few irregularly scattered pale brown spots. Whorls nine, including a two-whorled protoconch. Sculpture: the minute turbinata protoconch is finely spirally grooved. In contrast to this the first adult whorl appears with a broad shoulder, beneath which are two conspicuous keels. Fresh spirals arise by intercalation on the subsequent whorls, till alternately larger and smaller, they amount to sixteen on the penultimate. Behind the aperture are about twenty-eight spiral cords of various sizes, sometimes with minor threads in their interstices. On the second mature whorl, nine prominent radial ribs arise, undulating the keels. After increasing to eleven and maintaining their relative prominence for several whorls, the ribs commence to fade on the antepenultimate, they disappear from the last whorl. About the penultimate and last whorl, equal radials and spirals produce by intersection an evenly beaded surface. The anal fasciole occupies a shelf on the summit of the whorl and is sculptured by crescentic threads. Aperture ovate, outer lip dentate from the revolving sculpture, inner lip with a thin callus, at the posterior angle a slight sinus, canal short and broad. Length, 23; breadth, 9 mm.

³⁷ Langkavel—Donum. Bismark, 1871, p. 32, pl. i., fig. 1.

³⁸ Pace—Journ. de Conch., 1, 1902, p. 421.

This is the largest of local *Daphnella*, *D. fragilis*, Reeve, being next in size. From that *D. versivestita* is distinguishable by the strong radial ribs of the upper whorls. In the novelty the body whorl is about half, in *D. fragilis* about two-thirds of the total length.

Hab.—Botany Heads (type) ; Broken Bay (W. H. Hargraves) ; Port Jackson (J. Brazier) ; Newcastle (J. Mitchell) ; Catherine Hill Bay (R. L. Cherry) ; Woolgoolga (C. Laseron) and Gerrin-gong (R. Etheridge, Junr.).

LATIRUS FISCHERIANUS, Tapparone-Canefri.

Latirus fischerianus, Tapp. Can, Journ. de Conch., xxx., 1882, p. 33, pl. ii., figs. 8, 9.

Nassaria mordica, Hedley, Proc. Linn. Soc. N. S. Wales, xxxiv., 1909, p. 462, pl. xlv., fig. 100.

Mr. J. C. Melvill in a recent review³⁹ of the genus *Latirus*, conjectured that *Nassaria mordica* would prove identical with *Peristernia corallina*, Melvill and Standen. That he might definitely decide the question I forwarded to him specimens of the former. Having examined these he replied (8=ix=11) that though *N. mordica* is distinct from *P. corallina*, it is identical with *L. fischerianus*, Tapp. Can.

LATIRUS PAETELIANA, Kobelt,

var. CARPENTARIENSIS, var. nov.

(Plate xliii., fig. 34).

Shell slender, fusiform, canal long. Colour uniform ochraceous. Whorls nine, including a smooth two-whorled protoconch. Ribs broadly undulating, alternate vertically, vanishing on base and towards the suture. Both ribs and interstices over-run by low spirals of which there are ten on the penultimate and about thirty on the last whorl. Within the outer lip there are a dozen revolving raised threads which fail to reach the edge. Length, 34 ; breadth 14 mm.

³⁹ Melvill—Journ. of Conch., xiii., 1911, p. 168.

From *Turbinella paeteliana*, Kobelt,⁴⁰ this appears to differ in colour and by having the same number of whorls in three quarters the size. Still in general appearance it agrees so far with Kobelt's figure and description that it seems better to introduce it as a variety than as a new species.

Hab.—I dredged several specimens in 10 fathoms off Mapoon, Gulf of Carpentaria.

MITRA NODOSTAMINEA, *sp. nov.*

(Plate xliii., fig. 35).

Shell small, solid, fusiform. Colour uniform gray buff. Whorls seven, including a smooth two whorled protoconch, divided by channelled sutures. Sculpture: all adult whorls are closely latticed by radial and revolving cords. The radials amount on the last whorl to fifty, densely packed, varying from slight to stout, the larger appearing under the lens as a bundle of fibres. Spirals on the last whorl fifteen, on the upper whorls four, deeply impressed by narrow radial interstices, chiefly appearing as polished knots on the radial cords. Aperture very narrow, outer lip simple, inner overspread with a layer of callus. Columella plications three, anterior slight, posterior well developed. Length, 14; breadth, 6 mm.

This is a deep water representative of *Mitra strangei*, Angas⁴¹, in which spiral sculpture prevails or predominates. Gatliff and Gabriel have reduced *Mitra franciscana* to a synonym of *M. strangei*.⁴² In the original description Angas states that *M. strangei* was also obtained at Moreton Bay by F. Strange to whom he dedicated it. Overlooking this note I failed to include the species in the catalogue of the Marine Mollusca of Queensland.

Hab.—As *Mitra strangei* the novelty is recorded from 63 to 75 fathoms off Port Kembla (type of *M. nodostaminea*); from 50-52 fathoms off Botany⁴³; and from 80 fathoms off Narrabeen.⁴⁴ I have also taken it in 100 fathoms off Wollongong.

⁴⁰ Kobelt—Conch. Cab., 2nd Ed., iii., pt. 3, 1876, p. 71, pl. 18, figs. 2, 3.

⁴¹ Angas—Proc. Zool. Soc., 1867, p. 110, pl. xiii., fig. 4.

⁴² Gatliff and Gabriel—Proc. Roy. Soc. Vict., n.s., xxi., 1908, p. 371.

⁴³ Hedley—Austr. Mus. Mem., iv., 1902, p. 372.

⁴⁴ Hedley—Rec. Austr. Mus., vi., 1907, p. 287.

PYRENE INTRICATA, *nom. mut.*

Columbella clathrata, Brazier, Proc. Linn. Soc. N. S. Wales, i., 1877, p. 229; *Id.*, Hedley, Rec. Austr. Mus., iv., 1901, p. 123, pl. xvi., fig. 6 (not of Dujardin, 1835, of Gurnitz, 1875, nor of Tate, 1893, *vide* Pace, Proc. Malac. Soc., v., 1902, p. 67).

It has been shown that in Palæontology the name of *Columbella clathrata* has been thrice proposed. As Brazier's choice of this name is thereby twice invalidated a substitute is here suggested.

MUREX PATAGIATUS, *sp. nov.*

(Plate xliii., fig. 36).

Shell rather small but solid, biconical. Six whorls remain on the type, which is decollated. Colour cream. Sculpture: there are three varices to a whorl, midway between each pair is a rib almost as prominent as a varix. Fine even spiral threads at the rate of about twenty to the last and eight to the penultimate whorl overrun the shell. These are crossed by a radial system of close fine scales elaborately plicated in the interstices. Aperture ovate, fortified without by a broad and unbranched varix, on the opposite side the inner lip stands clear of the shell for some distance. Canal short and broad. Length of type, 34; breadth, 18 mm. Another specimen 46 and 26 mm.

The novelty is closely related to *M. denudatus*, Perry, but whereas *M. denudatus* has always two intervariceal ribs, *M. patagiatus* has, like *M. territus*, Reeve, but one. Further, as far as limited material permits me to judge, the varices of *M. patagiatus* are not prone to sprout into fronds like *M. denudatus*. In being so bare of frills it resembles *M. capucinus*, Lamk.

Hab.—Type dredged by Mr. J. Brazier in 8 fathoms off Green Point, Watson's Bay, Port Jackson. Two worn specimens were gathered by myself on the beach at Ballina, N. S. Wales. Mr. Brazier's specimen is the only one that I have seen from the neighbourhood of Sydney, so the species is rare here and is, probably an intruder from the north.

THAIS AMBUSTULATUS, sp. nov.

(Plate xliv., fig. 37).

Shell of a medium size, very solid, biconical. Colour cream, stained with chocolate on the peripheral projections. Whorls seven. Sculpture: six prominent perpendicular ribs appear on the periphery, but fade away above and below, on the spire these are represented by peripheral knots. Dense spiral threads surround the shell at the rate of about fourteen on the penultimate and thirty-two on the last, a pair at the periphery and two or three below much exceed the rest in size. All these are overrun by small close scales. Columella, broad and smooth. Outer edge of lip wrinkled by external sculpture, deeper within lie four small tubercles. Behind the short and broad canal is variously developed an axial cavity. Length, 33; breadth, 22 mm.

No other Australian shell seems close enough to be worth comparison with this. Under my manuscript name this species is included in a list of additional Queensland species by Mr. J. Shirley.⁴⁵ I may take this opportunity to suggest that though much valuable information is conveyed in this list, yet in many cases Mr. Shirley has been misled by correspondents who furnished him with foreign shells. From Torres Strait especially several exotic species are noted, among which the European *Gibbula magus* is a glaring example. Our surprise at finding *Cypræa onyx* in an Australian Catalogue is not lessened by observing that it is reported from an inland locality—Burketown. By restricting his records to his own experience Mr. Shirley might have avoided adding a fresh water shell, *Neritina pulligera*, to the marine fauna; or a synonym for an additional entry, as *Austriella sordida*, Tenison Woods, for *Lucina corrugata*, Deshayes.

Hab.—Caloundra, Queensland, on rocks (Kesteven and Shirley); Ballina, N. S. Wales (Hedley), and Trial Bay (Laseron).

CASSIDULA NUCLEUS, Martyn.

Limax nucleus, Martyn, Universal Conchologist, 1784, pl. 67, outer figures.

The identity of this species has been the subject of debate. Dr. von Martens made a critical examination⁴⁶ of Martyn's work

⁴⁵ Shirley—Proc. Roy. Soc. Q'land., xiii., 1911, p. 102.

⁴⁶ Martens—Malak. Blatt., xix., 1872, p. 12.

and concluded that Pfeiffer, Gassies and others who had attempted to identify *C. nucleus* had failed to do so. He thought that this shell was represented by *Auricula sulculosa*, Mousson.⁴⁷ Afterwards he altered this opinion and re-established⁴⁸ *C. sulculosa*. Dr. von Martens seems to have been unaware of the falsity of the locality "Otaheite" ascribed to the species in question. Garrett states that no *Cassidula* penetrates further east into the Pacific than Samoa.⁴⁹ This statement not only corrects an error but limits the area within which *C. nucleus* is to be sought. It may be assumed that with Martyn's other shells this was procured by Capt. Cook's expedition. Within the range of the genus, that expedition visited Tanna in the New Hebrides, Balade and an islet Ile Amere, south of New Caledonia, several places on the east coast of Australia and Pulo Condore, an island south of Cochin China. Had it occurred in the last, Dr. von Martens who made so close a study of the East Indian mangrove mollusca could not have failed to recognise it. There is a New Caledonian shell identified by Crosse⁵⁰ and excellently figured by Gassies for *C. nucleus*. But that consistently differs in its proportions, being shorter and broader than the original illustration. From Cooktown and Moa Island, Torres Strait, there are in this collection specimens whose proportions exactly coincide with the figure in the "Universal Conchologist". The Queensland shells are 15 mm. long, whereas the figure is 20 mm. If it be permissible to suppose that the artist enlarged his drawing the correspondence would be complete. The figure shows a shell without an upper parietal plait, our specimens show that this plait is a senile character which does not appear till the rest of the armament of the aperture has formed. While the "Endeavour" was being repaired on Cooktown beach her people had the opportunity of gathering the species where it still occurs.

CASSIDULA BILABIATA, *sp. nov.*

(Plate xlv., figs. 38, 39, 40).

Shell small solid ovate, pointed above, obliquely truncate below. Colour buff, banded with chocolate, sometimes four dark bands are separated by light bands of equal breadth, sometimes the lower bands coalesce, usually a dark and a light

⁴⁷ Mousson—Land. Süßwass. Moll. Java, 1849, p. 45, pl. v., fig. 8.

⁴⁸ Martens in Weber—Zool. Erg. Niederland. Ostind., iv., 1867, p. 143.

⁴⁹ Garrett—Proc. Zool. Soc., 1887, p. 297.

⁵⁰ Crosse—Journ. de Conch., xlii., 1894, p. 318.

band ascend the spire, callus of the aperture ochraceous. Whorls six. Sculpture: close fine spiral threads, crossed by fine growth striæ, a stronger subsutural cord ascends the upper whorls. Base a funnel, surrounded by a strong keel. A stout projecting varix continues the basal keel and slightly intrudes upon the suture. Beyond the varix the aperture is considerably produced but the ordinary colour and sculpture is not repeated upon this part of the shell. Within the outer lip a projection rises from the base for two-thirds the height of the aperture and there ends abruptly. Midway down the aperture on the left side, at the horizon of the basal keel, is a stout entering plication. The space above and below this is divided by a smaller parietal tubercle and a stronger columella plait. Length, 7.5; breadth, 4 mm.

Hab.—I obtained eight specimens from the roots of mangroves near the beach about a mile south of Cooktown, Queensland. The uniformity of the series precludes the idea that the twisted base might be a deformity.

PAPUINA MUENSIS, *sp. nov.*

(Plate xlv., figs. 44, 45).

Shell small, trochoidal, spreading towards the base and thus gaining a concave profile, minutely perforate. Whorls six, rather rapidly increasing, slightly convex and parted by impressed sutures. Colour buff with a narrow zone of chocolate on the periphery, continued as a supersutural thread on the upper whorls and visible within the aperture; the apex and the columella are also chocolate. Sculpture: oblique irregular growth lines which tend to form knots on the periphery, under the lens appear also close incised waved spiral lines. Aperture elliptical, abruptly descending and very oblique, lip produced and narrowly reflected margins continued and united by a callus ridge. Columella very short and oblique. Base tumid. Umbilicus narrow and oblique. Height, 14; maj. diam., 14; min. diam., 12 mm.

The nearest Australian relation to *P. muensis* seems to be *P. poiretiana*, Pfeiffer, from Night Island, about one hundred and eighty miles to the south. The latter is far larger, proportionately narrower and the aperture is less contracted. The figure of *Helix bertiniana*, Tapparone Canefri⁵¹ has some resemblance to the novelty.

Hab.—Mua, Moa or Banks Island in Torres Strait. Collected by Mr. H. Elgner.

⁵¹ Tapparone Canefri—Ann. Mus. Civ. Genoa, xix, 1883, pl. ii., figs. 24-26.

PLANISPIRA CYCLOSTOMATA, *Le Guillou*.

(Plate xlv., figs. 51, 52, 53, 54).

Among fallen leaves under bushes by the sea-side at Mapoon, entrance of the Batavia River, on the east coast of the Gulf of Carpentaria, I gathered in May, 1903 a few land shells. One of these was *Microphyura hemiclausa*, Tate, and another was the shell illustrated herewith. It is a pale horn colour with a russet peripheral band, maj. diam. 7; min. diam., 5.5; height, 3 mm., and has a remarkable sculpture of elongate grains.

This character leads me to identify it as *Helix cyclostomata*, described by Dr. Le Guillou⁵² as "papillis linearibus obsita." The type came from Warrior, Tud, or Toud Island in Torres Strait, about seventy-two miles north-east of Cape York, and was doubtless gathered by himself when the "Zelée," of which he was surgeon-major, touched there in June, 1840.

The official account of the Zoology of this voyage ignores the publication of this and other species by LeGuillou, who seems to have been on bad terms with the authorities. Under the manuscript name of "*Helix strangulata*, Hombron and Jacquinot," L. Rousseau⁵³ described from Toud Island a shell having regular numerous transverse striæ, which in other respects agrees with LeGuillou's description. This name had previously been used for a West Indian shell by C. B. Adams.⁵⁴

The illustration of *H. strangulata*, which had appeared previous to the description of Rousseau, was claimed by Pfeiffer⁵⁵ as representing his *Helix tuckeri*. This latter, whose sculpture was defined as "breviter et sparsim pilosa," was described⁵⁶ from Sir Charles Hardy Island, about one hundred and eight miles to the south-east of Cape York, and was gathered by Macgillivray in 1844. It was roughly figured in the second edition of Chemnitz's "Conchilien Cabinet," Bd., i., Abth. 12, 1846, pl. 79, figs. 10-12. Subsequently Dr. Pfeiffer suggested the identity of his *H. tuckeri* with *H. cyclostomata*.⁵⁷

⁵² Le Guillou—Rev. Soc. Cuv., 1842, v., p. 141.

⁵³ Rousseau—Voy. au Pôle Sud, Moll. 1854, p. 16, pl. vi., figs. 1-4.

⁵⁴ C. B. Adams—Contributions to Conchology, ii., p. 30, 1849.

⁵⁵ Pfeiffer—Mon. Helic., iii., 1853, p. 236.

⁵⁶ Pfeiffer—Symbolæ ad Hist. Helic., iii., 1846, p. 77.

⁵⁷ Pfeiffer—Mon. Helic., i., 1848, pp. 345, 379.

Prof. E. Forbes confirmed the identity of *H. cyclostomata*, *H. strangulata* and *H. tuckeri*, he added a fresh habitat, Sunday Island, a few miles west of Sir C. Hardy Island.⁵⁸

Mr. E. A. Smith gave an obscure figure of *H. cyclostomata*, reported it from Blackwood Bay, Cape York, and added as synonyms, *H. tuckeri*, Pfr. and *H. strangulata*, Hombron and Jacquinot.⁵⁹ But in his subsequent report on the land shells collected by Prof. A. C. Haddon in Torres Strait, he altered his opinion and without explanation separated *H. cyclostomata* from *H. tuckeri*, attaching *H. strangulata* to the latter.⁶⁰

Those who united these three names paid no regard to the discrepancy in the sculpture assigned to each; *H. cyclostomata* with elongate papillæ, *H. tuckeri* with short scattered bristles and *H. strangulata* with numerous regular transverse striæ. I find that *H. cyclostomata* has a wide range both geographically and in variation. It inhabits all the islands of Torres Strait and both coasts of Cape York Peninsula. On Nagbir Island I collected specimens in which the grain sculpture had almost disappeared, instead were fine radiating thread riblets, thus showing that the *H. strangulata* sculpture is within the variation range of *H. cyclostomata*. Pfeiffer's definition "*breviter et sparsim pilosa*" does not apply to any specimens that I have examined; possibly he mistook the grains for bristles. Since, however, he withdrew *H. tuckeri* as a synonym of *H. cyclostomata*, and Macgillivray, who collected it agreed, I am content to accept their judgment.

Another form has been confused with the foregoing species. I propose now to distinguish it as—

PLANISPIRA TRUCULENTA, *sp. nov.*

Planispira tuckeri, Pilsbry (*non* Pfeiffer), *Man. Conch.*, 2nd ser., ix., 1894, pl. xix., figs. 18, 19.

In shape, size and colour it agrees with *P. cyclostomata*, but it is without the grained surface, has a more open umbilicus and possesses a tubercle on the inner base of the aperture. Its habitat is Port Curtis, Queensland, twelve degrees south of the locality of the other species. An excellent figure of it has been given under the title of *Planispira tuckeri*, Pfr., by Pilsbry.

⁵⁸ Forbes—Voy. "Rattlesnake," ii., 1852, p. 370.

⁵⁹ Smith—Zool. "Erebus" and "Terror," *Moll.*, 1874, p. 2, pl. iv., fig. 18.

⁶⁰ Smith—Proc. Roy. Dublin Soc., 1890, p. 10.

XANTHOMELON MARCIDUM, sp. nov.

(Plate xlv., figs. 47, 48, 49, 50).

Shell solid, deeply lenticular, carinate, spire moderately elevated, base rounded, narrowly perforate. Colour uniform raw umber. Whorls four and a half, gradually increasing, the last suddenly and deeply descending at the aperture. Sculpture: fine irregular oblique growth lines, entire surface roughened by microscopic granules, a well developed keel winds along the periphery of the last whorl and up the spire above the suture. Aperture subrhomboidal, very oblique, margins united by a callus ridge. Lip expanded, slightly thickened and a little reflected, especially at the base. Umbilicus deep and narrow, partly covered by the lip. Specimen figured, maj. diam., 17; min. diam., 15; height, 10 mm.; another specimen, 19; 15; 9 mm.

The form and sculpture of the shell is considerably modified in dry countries, so that the affinities of a species is thereby masked. In the present case the shell characters are an insufficient guide to generic classification and its reference to *Xanthomelon* awaits contradiction or confirmation from anatomical study.

Hab.—Uabba Range, twelve miles west of Lake Cudgellico, Central New South Wales. One shell from Mr. R. P. Sellois and several from Mr. James Knight.

ATYS PALMARUM, sp. nov.

(Plate xlv., fig. 41).

Shell small, thin, involute, ovate-truncate, smooth, glossy, narrowly perforate above and below. Sculpture: three incised lines on the base and two on the shoulder, intervening area smooth. Aperture crescentic, lip angled at base and vertex, columella reflected. Height, 1.5; breadth, 1.2 mm.

By its inflated form this is related to the typical *Atys*, such as *A. naucum*, Linn., from which it differs by size, by the reduction of impressed lines and by absence of fold on lip and columella.

Hab.—I dredged a few specimens in fifteen fathoms off the Palm Islands, Queensland.

HYDATINA EXIGUA, *sp. nov.*

(Plate xlv., fig. 46).

Shell minute, thin, globular, truncate above, rounded below, imperforate. Colour: on a white ground are two narrow peripheral chocolate bands, twice their breadth apart, connected with a wash of cream, and visible internally. Surface smooth. Within the aperture a layer of dull callus is spread on the preceding whorl. Columella deeply spirally inserted. Apex perforate, spire immersed. Height, 1.9; breadth, 1.5 mm.

By size and colour pattern this differs widely from co-generic forms.

Recent additions bring the family Aplustridæ to have their focus of distribution in Eastern Australia. *Hydatina physis*, Linne, is of ordinary occurrence from Sydney northwards. *H. albocincta*, Hoeven, was recorded by G. F. Angas from Port Stephens, N.S. Wales, and latterly by J. Shirley from Stradbroke Island, Queensland;⁶¹ it is also in this Museum from Keppel Bay. An example in this Museum of *H. circulata*, Martyn (usually known under the younger name of *H. velum*, Gmelin), from Port Stephens establishes another Australian record. The novelty makes the fourth. *Bullina scabra*, Gmelin, is common in New South Wales. Shirley records it from Caloundra. I found it at the Palm Islands, Queensland, whence it ranges to South Tasmania. *Aplustrum amplustre* has been noted from North Queensland by J. Brazier, Melville and Standen, it has also occurred to me at Green and Murray Islands. It is contended⁶² that this genus should be extended to embrace *Diaphana brazieri*, Angas. From Botany Heads, N. S. Wales, *Micromelo guamensis*, Quoy and Gaimard, has been reported.⁶³

H. exigua was sent to me from Tasmania by Miss M. Lodder as the obscure *Akera tasmanica*, Beddome. Transferring the species to *Hydatina* I used her shell for a figure. Subsequently this species appeared in Sydney Harbour.⁶⁴ Messrs Gatliff and

⁶¹ Shirley—Proc. Roy. Soc. Queensland, xxiii., 1911, p. 102.

⁶² Hedley—Proc. Linn. Soc. N. S. Wales, xxvii., 1902, p. 16, pl. iii., fig. 36.

⁶³ Henn—Proc. Linn. Soc. N. S. Wales, xx., 1896, p. 520.

⁶⁴ Hedley—Proc. Linn. Soc. N. S. Wales, xxv., 1901, p. 725, fig. 22; *Op. cit.*, xxvii., 1903, p. 603.

Gabriel fortunately obtained the real *Akeru tasmanica*, illustrated the shell and corrected my error. Their identification was confirmed by Mr. W. L. May,⁶⁵ who, with Prof. R. Tate had redescribed it. From these gentlemen's observations it is clear that I was misled by a wrong identification. This I now withdraw and bring forward the *Hydatina* as a new species distinct from Beddome's *Akera*.

Hab.—The original of the present figure and description (type) I obtained (15/5/02) from a bottle sunk in a rock pool at Middle Head, Sydney. Miss Lodder's shell which I drew and returned probably came from North Tasmania, perhaps Ulverstone.

PHILINE ANGASI, Crosse and Fischer.

(Plate xliv., figs. 42, 43).

A large *Philine*, common on the Australian and New Zealand coasts was described by Crosse and Fischer as *Bulla angasi*, and they afterwards remarked that it was abundant at Suez⁶⁶

This Suez form was subsequently named *P. vaillanti* by Issel.⁶⁷

The Australian form has usually, but not unanimously, been maintained as distinct. Kobelt indicates⁶⁸ as supporters, Angas, Brazier, Sowerby, Hutton, Watson and Pilsbry. The first to question the current nomenclature was Tenison Woods⁶⁹ who referred the Tasmanian mollusc to *P. aperta*, Linn.; in this he was followed by Tate and May.⁷⁰ To the European *P. aperta*, Cook has united both *P. angasi*, *P. vaillanti*, Issel, and *P. erythroga*, H. Adams.⁷¹ Treating of the New Zealand form Suter⁷² reduces *P. angasi* to a synonym of *P. aperta*. On the contrary when discussing the Victorian mollusca, Pritchard and Gatliff⁷³ distinguish *P. angasi* from *P. aperta*.

⁶⁵ Tate and May—Proc. Linn. Soc. N. S. Wales, 1901, p. 460.

⁶⁶ Crosse and Fischer—Journ. de Conch., xiii., 1865, pp. 38, 110, pl. ii., fig. 8.

⁶⁷ Issel—Malac. Mar. Rosso., 1869, p. 166, pl. 1, fig. 14.

⁶⁸ Kobelt—Conch. Cab., 2 ed., 1., pt. xi., 1896, p. 152.

⁶⁹ Ten. Woods—Proc. Roy. Soc. Tasm., 1877, p. 47.

⁷⁰ Tate and May—Proc. Linn. Soc. N. S. Wales, xxvi., 1901, p. 418.

⁷¹ Cook—Ann. Mag. Nat. Hist. (5), xvii., 1886, p. 122.

⁷² Suter—Index Faun. Nov. Zealand, 1904, p. 69.

⁷³ Pritchard and Gatliff—Proc. Roy. Soc. Vict., xv., 1903, p. 218.

Pilsbry comments on this controversy.⁷⁴ He suggests that means for discrimination might be furnished by the gizzard plates. Such plates from a Norwegian specimen are figured by Sars⁷⁵ and more elaborately from a French specimen by Guiart⁷⁶ and Vayssiere.⁷⁷

For contrast with these I now offer figures from Sydney material of the small ventral and one of the larger dorso-lateral plates of *P. angasi*. Unfortunately I have no plates of the European form for actual comparison. The likeness to a cocked hat noted by the original authors holds good with our specimens. Angas stated that the gizzard of the Australian form resembles that of the British *P. quadripartita* (= *P. aperta*).⁷⁸ It has been generally overlooked that figures of the radula of a Victorian specimen were published by Maplestone.⁷⁹

⁷⁴ Pilsbry—*Man. Conch.*, xvi., 1895, p. 8.

⁷⁵ Sars—*Moll. Reg. Arct. Norv.*, 1878, pl. xi. (anat.), fig. 15.

⁷⁶ Guiart—*Mém. Soc. Zool. France*, xiv., 1901, p. 80, figs. 40, 41, 42.

⁷⁷ Vayssiere—*Ann. Mus. Marseilles, Zool.*, ii., 1885, p. 33, pl. i., figs. 20, 21.

⁷⁸ Angas—*Proc. Zool. Soc.*, 1867, p. 227.

⁷⁹ Maplestone—*Monthly Micro. Journ.*, 1872, p. 52, pl. xxvii., fig. 23.

EXPLANATION OF PLATES

PLATE XL

- Figs 1, 2 *Nucula superba*, Hedley
Fig 3 *Myodora parvimentis* Hedley
" 4 " *tessera*, Hedley
Figs 5, 6 7, 8 Various aspects hinge and sculpture of *Rochelasma excellens*, Hedley
" 9 10 11 Various aspects and sculpture of *Glanculus comaricus*, Hedley

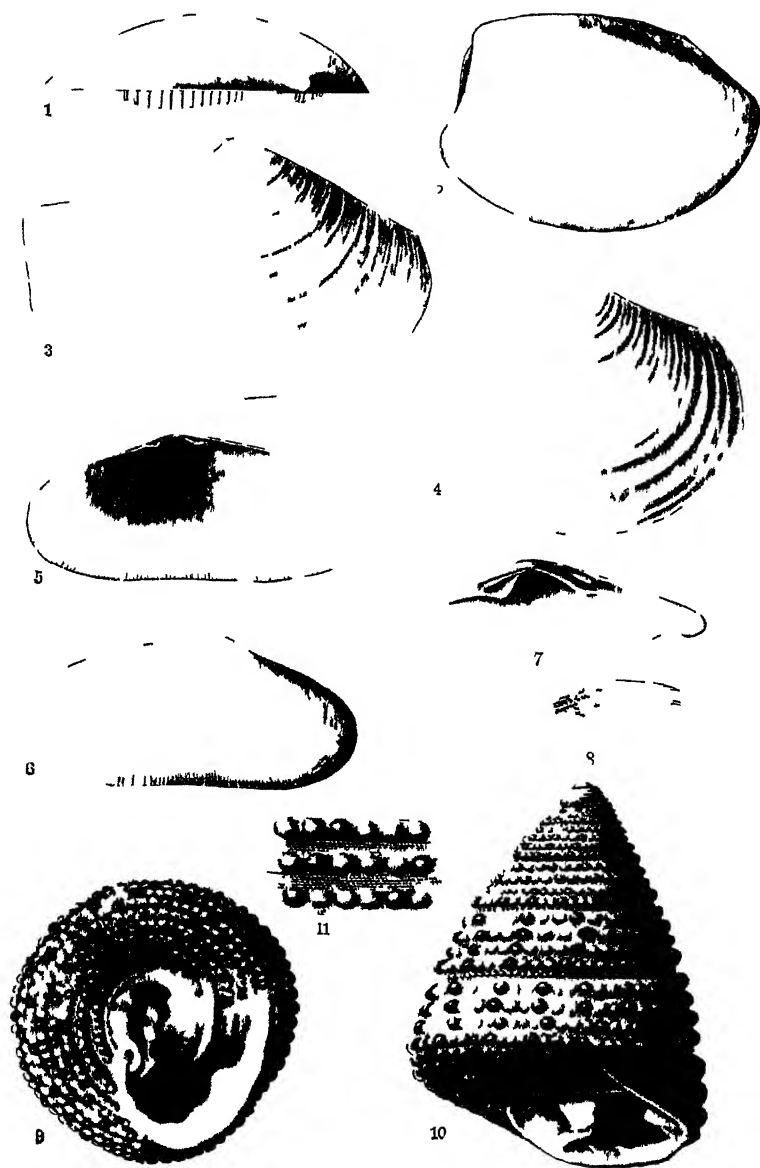


PLATE XLI.

- Fig 12 *Monodonta diminuta*, Hedley.
 Figs 13, 14 15 Various aspects of *Mimolia henniana*, Melvill,
 Fig 16 *Alania matronalis*, Hedley
 „ 17 *Potamopygus ruppia*, Hedley,
 „ 18 *Conthomyia aspera*, Hedley,
 „ 19 *Crocea gemmata*, Hedley,

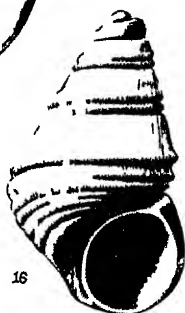
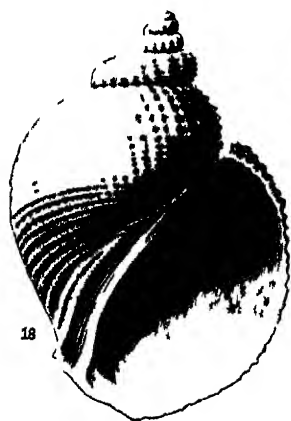
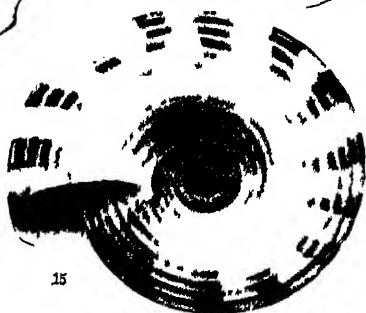
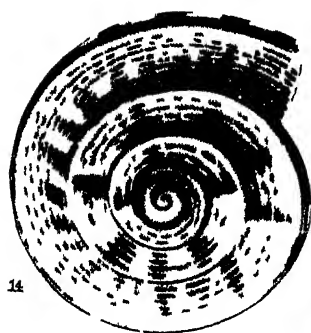
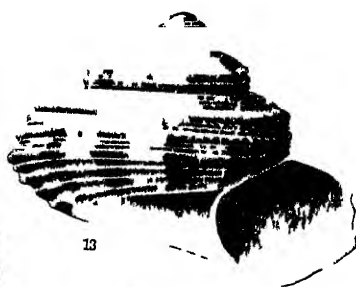
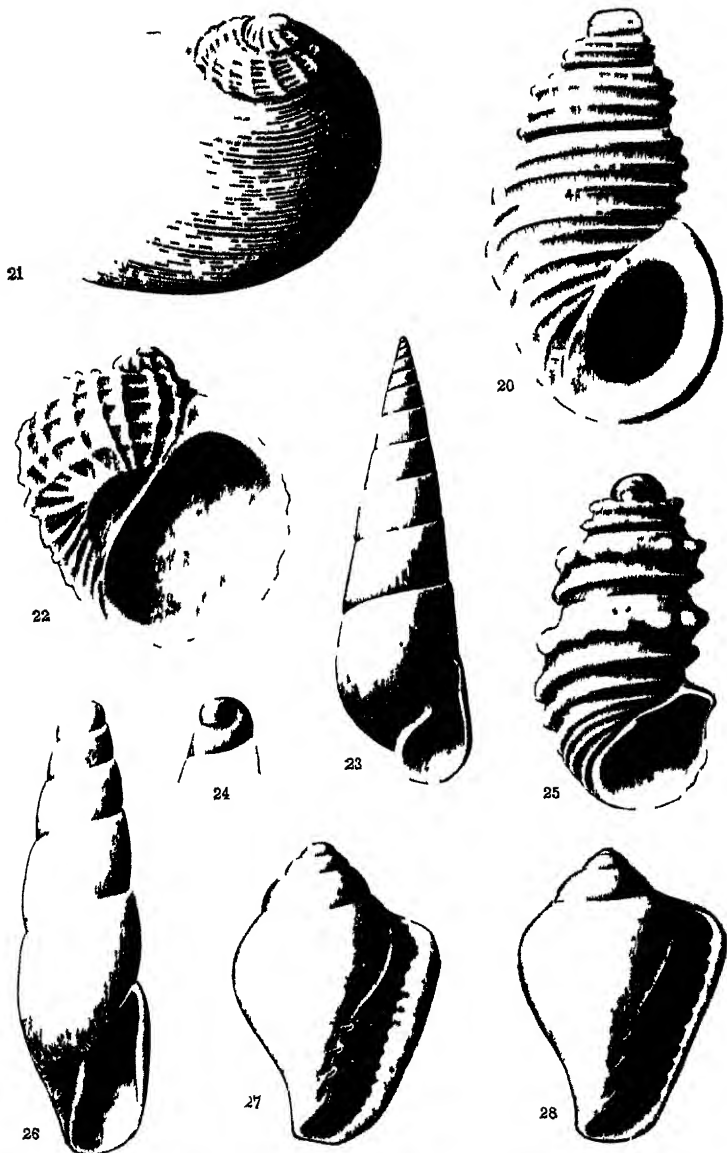


PLATE XLII

- Fig 20 *Rissoina carpenterensis*, Hedley
 Figs 21 22 Young and half grown *Vanikoro sigaretiformis*, Reclus
 „ 23, 24 Shell and apex of *Synnola manifesta*, Hedley
 Fig 25 *Odontostoma retincta* Hedley
 „ 26 *Chilintomia corallina*, Hedley
 „ 27 *Mamarella virgata*, Brazier
 „ 28 „ *perminata*, Hedley



PLATT XLIII.

- figs 29 30 *Scaphella mostemua*, Hedley
- Fig 31 *Duplicaria vallesia*, Hedley
- 32 *Conus micarius*, Hedley
- „ 33 *Daphnella vesivertita*, Hedley
- „ 34 *Lutrus paretiana*, v *carpentariensis*, Hedley
- „ 35 *Mitra nodostaminea*, Hedley
- „ 36 *Murex palagiatus*, Hedley

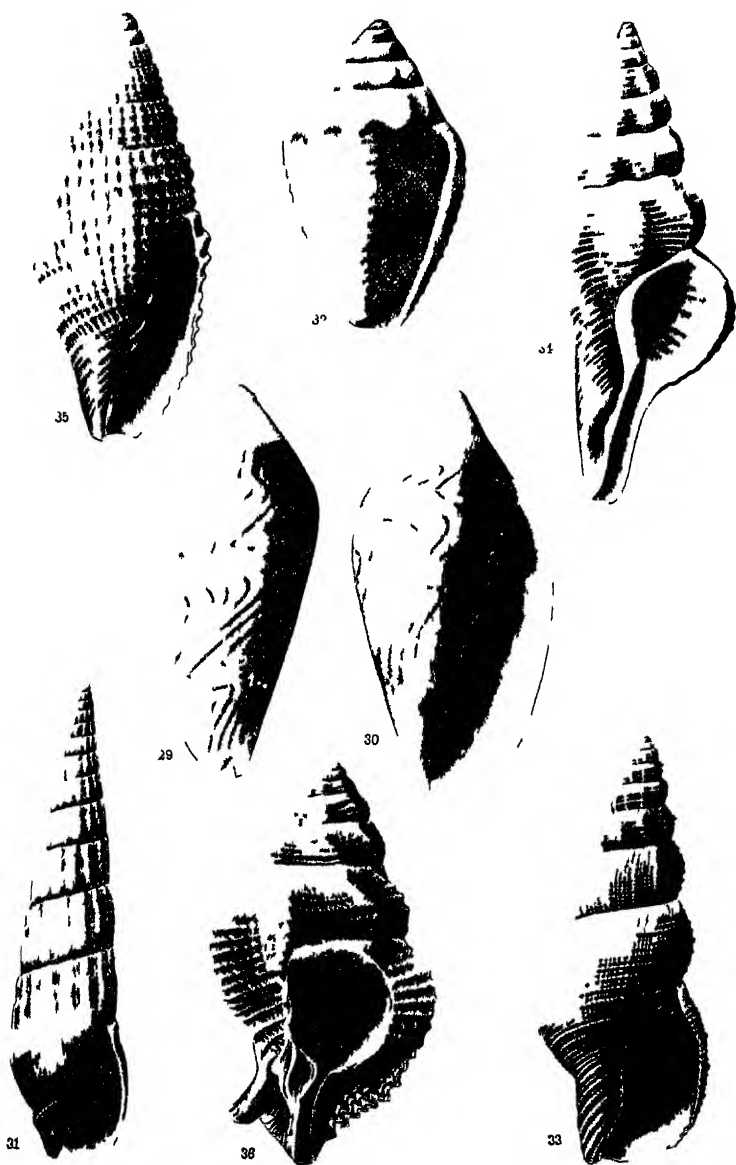


PLATE XLIV

- Fig. 37. *Thais ambustulatus*, Hedley
Figs. 38, 39, 40. Front, base and back of *Cassidula bilabiata*, Hedley
Fig. 41. *Alys palmarum*, Hedley.
Figs. 42, 43. Gizzard of *Phidm angasi*, Crosse and Fisher
,, 44, 45 *Papuna muensis*, Hedley



37



42



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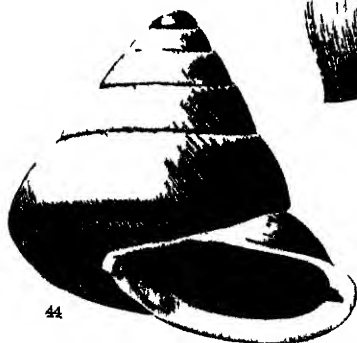
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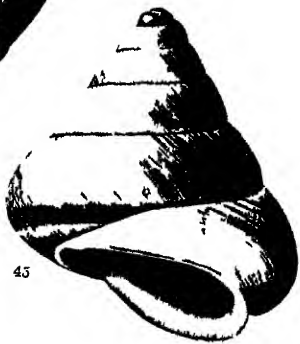
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PLATE XLV

- Fig 46 *Hydatina erigua*, Hedley
 Figs 47, 48, 49, 50 Various aspects and sculpture of *Xanthomelon*
marcidum, Hedley
 51 52 53, 54 Various aspects and sculpture of *Planispira*
cyllostomata, LeGuillon



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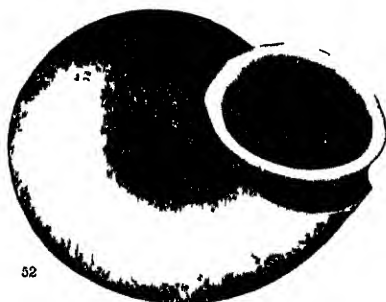
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AUSTRALIAN TRIBAL NAMES, WITH THEIR SYNONYMS.

Compiled from Ethnographical Works in the Australian
Museum Library, 1909.

By W. W. THORPE, Ethnologist.

I.—INTRODUCTION.

This compilation was originally intended as a hand-list for personal reference, to enable the writer to see at a glance the approximate, if not the definite, locality of any given Tribe, without having to search through the literature of the subject.

As the title implies, the matter was derived from Ethnographical works in the Australian Museum Library, but to these are added, or interpolated, a few obtained from other reliable sources. A Bibliography of the works consulted is given at the end.

As to Synonyms:—The writer has tried to make cross-references to obviously identical Tribes. In this connection, the various phonetic interpretations placed upon tribal names by different authorities, resulting in many spellings of the same word or words, are remarkable. Although upwards of six hundred names are in the list, the synonymy would reduce it by ten or fifteen per cent

The useful abbreviations adopted by Dr. W. E. Roth in his Ethnographical works have been included.

It is obvious that the Catalogue is far from complete, many Tribes having passed into oblivion before being recorded, while others may have yet to be discovered. It is possible that an occasional dialectal name has been included, but this is unavoidable. Where two hyphenated localities are given, the intention is to show that the Tribes are, or were, situated in the intervening areas.

II.—CATALOGUE.

RII. No.	TRIBAL NAME.	AUTHORITY.		LOCALITY.
1	AGUAGWILLA	...	<i>Curr</i>	...
2	AJOKOOT ...	...	<i>Curr</i>	Raffles Bay District, Northern Territory
3	ALLAUA ...	...	<i>Spencer and Gillen</i>	South of Daly Waters, Central Australia
4	AMINUNGO ...	...	<i>Curr</i>	Fort Cooper, Q'land
5	ANGARA-PINGAN	...	<i>Curr</i>	Raffles Bay District, Northern Territory
6	ANGOOTHERIBAN	...	<i>Curr</i>	Goulburn-Murray Rivers, Victoria
7	ANTAKLERRINYA	...	<i>Taplin</i>	Central Australia
8	ANULA ...	...	<i>Spencer and Gillen</i>	Gulf of Carpentaria (South Australian Territory)
9	ARKABA-TURA	...	<i>Curr</i>	70 miles from Port Augusta, S. Austr.
10	ARUNTA ...	...	<i>Spencer and Gillen</i>	Central Australia
11	AVANBURA ...	...	<i>Howitt</i>	North-east of 45°
12	AUMINIE ..	...	<i>Gason</i>	Neighbours of 106
13	" ...	...	<i>Curr</i>	Dieyerie District
14	AWARAKAL ...	...	<i>Howitt</i>	Between Hunter and Hawkesbury Rivers, N.S. Wales
15	BABBINBURRA	...	<i>Curr</i>	Near Clermont, Queensland
16	BABINGBURA	...	<i>Howitt</i>	North of Clermont, Queensland
17	BADJERI ...	...	<i>Howitt</i>	Paroo River, Q'land, near N. S. Wales border
18	BAHAUNJI ...	...	<i>Curr</i>	Bourke, N.S. Wales
19	BAIPULBURA	...	<i>Howitt</i>	Fitzroy River, south of Woodville, Queensland
20	BAKANJI ...	...	<i>Fraser</i>	Pastoral plains, be- tween Lachlan and Darling, N.S. Wales
21	BALLARDONG	...	<i>Curr</i>	York District, West- ern Australia
22	BALLERDOKKING	...	<i>Curr</i>	York District, West- ern Australia

REF. No.	TRIBAL NAME.		AUTHORITY.		LOCALITY.
23	BALUK-MERNEN	...	<i>Howitt</i>	...	North of Lake Hind marsh, Victoria
24	BALUK-WILLAM	...	<i>Howitt</i>	...	South of 360
25	BALUUNG-KAKAR	...	<i>Howitt</i>	...	Upper Owens River, Victoria
26	BANGERANG	...	<i>Curr</i>	...	Junction Goulburn and Murray Rivers, Victoria
27	BANGERANG	...	<i>Howitt</i>	...	North Goulburn River, Victoria
28	BARABABARABA	...	<i>Howitt</i>	...	North of Murray River, near Deniliquin
29	BARRABA-BARRABA	...	<i>Smyth</i>	...	Between Echuca and junction Murray and Darling, Victoria
30	BARKINJI ...	...	<i>Howitt</i>	...	East of Darling, between Menindie and Bourke
31	BARNAWATHA	...	<i>Smyth</i>	...	North-east Victoria
32	BARRATH ...	...	<i>Smyth</i>	...	Sherbrooke Creek, West Victoria
33	BARBUMBINYA	...	<i>Howitt</i>	...	North-east of Bourke, New South Wales
34	BARUNGA ...	...	<i>Howitt</i>	...	East of Paroo River, New South Wales
35	BELLUMBELLUM	...	<i>Smyth</i>	...	Lake Wellington, Gippsland, Victoria
36	BENBEDORES	...	...	...
37	BENDALGUBBER	...	<i>Curr</i>	...	Burdekin River, Queensland
38	BERRIAIT ...	...	<i>Howitt</i>	...	Central N.S. Wales
39	BIDJELLI (<i>Olan of KURNAI</i>)	...	<i>Howitt</i>	...	Gippsland, Victoria
40	BIDWELL = 3C	...	<i>Smyth</i>	...	Gippsland, Victoria
41	BIGAMBUL ...	...	<i>Howitt</i>	...	Gwydir-Macintyre Rivers, border New South Wales
42	BICALBURA ...	...	<i>Howitt</i>	...	West of Rockhampton, Queensland
43	BIMUREABURRA	...	<i>Curr</i>	...	Nogoa River, Q'land
44	BINBINGA ...	...	<i>Spencer and Gillen</i>	...	Macarthur River, Gulf of Carpentaria
45	BINGABURA ...	...	<i>Howitt</i>	...	Between Campaspe and Burdekin Rivers, Q'land

REL. No.	TRIBAL NAME.	AUTHORITY.		LOCALITY.
46	BINGOGHINA ...	...	<i>Spencer and Gillen</i>	Central Australia (West of Newcastle Waters)
47	BIRRIA ...	...	<i>Curr</i>	Junction Thomson and Barcoo Rivers, Q'land
48	BITHELBURA ...	...	<i>Howitt</i>	South of Clermont, Queensland
49	BITTABITTA = 417	...	<i>Curr</i>	Hamilton River, near Boulia, Queensland
50	BOANBURA ...	...	<i>Howitt</i>	South of No. 45
51	BOINJI (Bo. Roth abbreviation)	...	<i>Roth</i>	Boulia District, Queensland
52	BOMBARABURA ...	...	<i>Howitt</i>	Broad Sound, Q'land
53	BOOANDIK (cf. 71)	...	<i>Mathew</i>	South Australia
54	" "	...	<i>Curr</i>	Mount Gambier, South Australia
55	BOONGATPAN ...	...	<i>Curr</i>	Goulburn-Murray Rivers, Victoria
56	BOONOOKONG (cf. 79)	...	<i>Smyth</i>	South Coast of Victoria
57	BOONOOKOONG "	...	<i>Smyth</i>	Westernport, Victoria
58	BOORA BOORA ...	...	<i>Smyth</i>	Between Echuca and Darling-Murray junction, Victoria
59	BOORONG ..	...	<i>Mathew</i>	Lake Tyrill, Victoria
60	BOORT ...	...	<i>Smyth</i>	Lower Loddon River, West Victoria
61	BOOTHERBOOLOK (cf. 88)	...	<i>Curr</i>	Upper Goulburn River, Victoria
62	BOOTHERBULLOK ,,	...	<i>Curr</i>	Upper Goulburn River, Victoria
63	BOULBOUL ...	...	<i>Smyth</i>	Gippsland Lakes, Victoria
64	BRABRALUNG (Clan of KURNAI)	...	<i>Howitt</i>	Gippsland, Victoria
65	BRABROLONG	...	<i>Smyth</i>	North Gippsland, Victoria
66	BRABROLUNG	...	<i>Curr</i>	Gippsland, Victoria
67	BRABRIWOOLONG	...	<i>Smyth</i>	Between Mitchell and Tambo, Victoria
68	BRATAUALUNG (Clan of KURNAI)	...	<i>Howitt</i>	Gippsland, Victoria
69	BRAYAKAULUNG (Clan of KURNAI)	...	<i>Howitt</i>	Gippsland, Victoria

REF. No.	TRIBAL NAME.		AUTHORITY.		LOCALITY.
70	BREBABA ...	...	<i>Curr</i>	...	Head of Burdekir River, Queensland
71	BUANDIK (<i>cf.</i> 53-4)	...	<i>Howitt</i>	...	North west of Mount Gambier, S. Austr.
72	BULALLI ...	...	<i>Howitt</i>	...	East of Barrier Range, North west New South Wales
73	BULLA ...	...	<i>Curr</i>	...	Cape River District, Queensland
74	BUMBARA ...	...	<i>Curr</i>	...	Port Denison - Cape Gloucester, Q'land
75	BUNDAH-WARK-KANI	...	<i>Smyth</i>	...	Lake Tyers, Victoria
76	BUNGABABA...	...	<i>Curr</i>	...	Halifax Bay, Q'land
77	BUNGEHA ...	...	<i>Curr</i>	...	Mount Remarkable District, Flinders Ba., S. Australia
78	BUNTAMURRA	...	<i>Howitt</i>	...	North-west of Bulloo Creek, Queensland
79	BUNURONG (<i>cf.</i> 56-7)...	...	<i>Howitt</i>	...	Coast, Port Phillip- Wilson's Promon- tory, Victoria
80	BURABURA ...	...	<i>Howitt</i>	...	Murray River, at junction with Loddon River, Victoria
81	BURAPPA ...	...	<i>Howitt</i>	...	Loddon River, Victoria
82	BURAPPER ...	...	<i>Howitt</i>	...	Murray River, Victoria
83	BURHWUNDEIRTOH	...	<i>Smyth</i>	...	East of Muston Creek, West Victoria
84	BURIBURA ...	...	<i>Howitt</i>	...	Mountains on main- land, west of Great Keppel Islands, Queensland
85	BURNGALA ...	...	<i>Curr</i>	...	South of 236
86	BURRINGAH	...	<i>Miller and Weston</i>	...	Georgina River, Q'ld
87	BUTCHABURA	...	<i>Howitt</i>	...	Coast, south of Cape Manifold, Q'land
88	BUTHERA BALUK (<i>cf.</i> 61-2)	...	<i>Howitt</i>	...	South Goulburn River, Victoria
89	BYELLEE ..	...	<i>Curr</i>	...	Keppel Bay, Calliope River, and Curtis Island, Queensland

REF. No.	TRIBAL NAMES.	AUTHORITY.		LOCALITY.
90	CARBINEYINBURRA	...	<i>Curr</i>	... Burdekin River, Queensland
91	CARTOULOUNGER	...	<i>Curr</i>	... Burdekin River, Queensland
92	CHANGWA ...	...	<i>Curr</i>	... Irwin and Murchison Rivers, Queensland
93	CHEPARA ...	...		... Tweed River - Bris- bane, Queensland
94	CHIRPAL (CHI., Roth abbreviation)	...	<i>Roth</i>	... Atherton, Q'land
95	COBBLEBOBBER	...	<i>Curr</i>	... Burdekin River, Queensland
96	COLCALEEGA	...	<i>J. A. Thorpe</i>	... Cape York (Somerset), Queensland
97	COLONGULAC	...	<i>Smyth</i>	... Camperdown, Victoria
98	C'NANJI ...	...	<i>Spencer and Gillen</i>	... South-east of Daly Waters, Central Australia
99	COONAWANKE	...	<i>Smyth</i>	... Mount Shadwell, and west of Emu Creek, West Victoria
100	CUDJALLAGONG	...	<i>Smyth</i>	... Macquarie Range, Victoria
101	CULBAINGELLA	...	<i>Curr</i>	... Burdekin River, Queensland
102	CUMARINIA ...	...	<i>Curr</i>	... Burdekin River, Queensland
103	DALEBURRA	...	<i>Howitt</i>	... Mount Norman District, Q'land
104	DANDAN = 467	...	<i>Curr</i>	... Boyne River, Q'land
105	DARTYDARTY	...	<i>Smyth</i>	... Between Echuca and junction Murray- Darling, Victoria
105A	DEERIE ...	...	<i>Smyth</i>	... Lake Hope, Cooper Creek (Central Australia).
106	DIEYERIE ...	...	<i>Curr</i>	... 630 miles north of Adelaide, Central Australia
107	DIERI ...	...	<i>Fison</i>	... Cooper Creek, Central Australia

REF. No.	TRIBAL NAMES.		AUTHORITY.		LOCALITY.
108	DIRYERIE ...	...	<i>Gason</i>	...	630 miles north of Adelaide, Central Australia
109	DIPPEL ...	...	<i>Curr</i>	...	Moreton Bay, Q'land
110	DIPPIL ...	...	<i>Ridley</i>	...	Moreton and Wide Bays, and Burnett River, Queensland
111	DIRITYANGURA	...	<i>Howitt</i>	...	Junction Barcoo and Strzelecki Creek, Queensland
112	DJAPPUMINYOU	...	<i>Smyth</i>	...	Glenorchy, Victoria
113	DORN-BAURAKET	...	<i>Howitt</i>	...	West of Lake Hindmarsh, Victoria
114	DOOLEBARA ...	...	<i>Curr</i>	...	Halifax Bay, Q'land
114A	DOORA ...	...	<i>Curr</i>	...	Mount Remarkable District, Flinders Ra., S. Australia
115	DORABURA ...	...	<i>Howitt</i>	...	East of Belyando (Burdekin River), Queensland
116	DOVERAAK-BA-DAAN	...	<i>Smyth</i>	...	Buchan and Snowy Rivers, Victoria
117	DUNGADUNGARA	...	<i>Roth</i>	...	Boulia District, Queensland
118	DURROBURRA	...	<i>Curr</i>	...	Burdekin and Suttor Districts, Q'land
119	DUWINBARAP	...	<i>Smyth</i>	...	West of Wimmera River, Victoria
120	EAW ...	...	<i>Curr</i>	...	Northampton, West Australia
121	EIWAJA ...	...	<i>Curr</i>	...	Raffles Bay District, Northern Territory
122	ELOOKERA ...	...	<i>Roth</i>	...	Upper Georgina River, Queensland
123	EMON ...	...	<i>Howitt</i>	...	East of No. 324
124	EMU-MUDJUG	...	<i>Smyth</i>	...	Barnawatha, Victoria
125	ETICUP ...	...	<i>Curr</i>	...	90 miles north-west of King George Sound, W. Australia
126	EURONBBA ...	...	<i>Curr</i>	...	Burdekin River, Queensland
127	EURA = 475	...	<i>Curr</i>	...	Mount Serle, Flinders Ra., S. Australia
127A	EUHAYAYI (cf. 563, 565-6, 650-51)		<i>L. Parker</i>	...	Narran River, North-west N.S. Wales

REF. No.	TRIBAL NAME.	AUTHORITY.		LOCALITY.
128	GAIMBA (KAMILAROI)	<i>Fraser</i>	...	North-central New South Wales, south of Darling River
129	GALGALBULLUK	...	...	See JAJOWERONG
130	GARKGO - 357	...	<i>Fraser</i>	Monaro District, New South Wales
131	GEAWEGAL ...	...	<i>Howitt and Fison</i>	Hunter River, New South Wales
132	GEAWEGAL ...	...	<i>Howitt</i>	North of Hunter River, N.S. Wales
133	GILAMBABURA	..	<i>Howitt</i>	Central Fraser Island, Queensland
134	GINNING MAIONG	...	<i>Smyth</i>	Tallangatta Creek, Victoria
135	GOA ..	...	<i>Curr</i>	Diamantina River, Queensland
136	GOA ...	...	<i>Curr</i>	"Kulkadoon" District, Queensland
137	GOA ...	...	<i>Roth</i>	Upper Diamantina River, Queensland
138	GOFNPUL ...	...	<i>Curr</i>	Central and South Stradbroke Island, Queensland
139	GOOGABURRA	...	<i>Curr</i>	Islands off Broad Sound, Queensland
140	GOOWAR ...	...	<i>Curr</i>	Stradbroke and Moreton Bay, Queensland
141	GOURNDITCH MARA	...	<i>Howitt</i>	North of Portland and Warrnambool, Victoria
142	GOURNDITCH MARA	...	<i>Howitt and Fison</i>	Glenelg - Eumerella Rivers, Victoria
143	GURNO ...	...	<i>Howitt</i>	Warrego River, north of Bourke, New South Wales
144	GUNDANORA	...	<i>Smyth</i>	Omeo, Victoria
145	GUNNANI ("GUN," Roth abbreviation)	...	<i>Roth</i>	Staaten River, Q'land
146	GUNUNG-WILLAM	...	<i>Howitt</i>	South Campaspe River, Victoria
147	GRINGAI ...	...	<i>Howitt</i>	Hinterland of Port Stephens, New South Wales
148	GUDANG ...	...	<i>J. A. Thorpe</i>	Cape York (Somerset District), Q'land

RIT No.	TRIBAL NAMES.		AUTHORITY.	LOCALITY.
149	GUDANG ...	...	<i>Curr</i> ...	Cape York (Somerset District), Q'land
150	HILLERI ...	...	<i>Howitt</i> ...	Anxious Bay Bight, S. Australia
151	IKELBARA ...	...	<i>Curr</i> ...	Halifax Bay, Q'land
152	ILIAURA ...	...	<i>Spencer and Gillen</i>	Central Australia
153	ILLAGONA ...	...	<i>Curr</i> ...	Lynd River District, Queensland
154	ILIAURA ...	...	<i>Spencer and Gillen</i>	East of Barrow Creek, Central Australia
155	ILPIRRA ...	...	<i>Spencer and Gillen</i>	North of Macdonnell Ranges, Central Australia
156	ILPIRRA ...	...	<i>Spencer and Gillen</i>	Central Australia
157	INJILINJI ...	...	<i>Roth</i> ...	Leichhardt-Selwyn District, Q'land
158	JACKALBARAP (cf. 164).		<i>Smyth</i> ...	Wimmera District, Victoria (west of "DUWINBARAP")
159	JAJAURUNG (?=161-3).		<i>Howitt</i> ...	South Loddon River, Victoria
160	JAJOWERONG (see 159).		<i>Smyth</i> ...	Western Victoria
161	JAJOWERONG (see 159)		<i>Smyth</i> ...	Serpentine - Loddon-Mount Macedon, Victoria
162	JAJOWRONG (see 159)...		<i>Smyth</i> ...	Colac, Victoria
163	JAJOWURRONG (see 159).		<i>Smyth</i> ..	Loddon River, Victoria
164	JAKELBALAK (cf. 158).		<i>Smyth</i> ...	Wimmera District, Victoria
165	JARAMBIUK ...	...	<i>Smyth</i> ...	Wimmera District, Victoria
166	JUNDAI ...	...	<i>Curr</i> ...	Stradbroke and Moreton Islands, Q'land
167	JUPA-GALK ...	...	<i>Howitt</i> ...	West of Avoca River, Victoria
168	KAANGOOLOO	...	<i>Curr</i> ...	Lower Dawson River, Queensland
169	KABI ...	...	<i>Mathew</i> ...	Head of Mary River, Queensland
170	KABI ...	...	<i>Curr</i> ...	Mary River, Q'land
171	KAILTHIBAN = WAABINGULUM ...	...	<i>Curr</i> ...	Goulburn-Murray area, Victoria

REF No.	TRIBAL NAMES.	AUTHORIS.		LOCALITY.
172	KAITISH ...	<i>Spencer and Gillen</i>	Barrow Creek,	Central Australia
173	KAITISH ...	<i>Spencer and Gillen</i>	Central Australia	
174	KAKARAKALA ...	<i>Curr</i> ...	North-west Cape,	thirty miles south of Gascoyne River, West Australia
175	KALKADOON (<i>cf.</i> 239) ("KAL." Roth ab- breviation) ...	<i>Roth</i> ...	Leichardt - Selwyn District, Q'land	
176	KALKKALKGOONDEETCH (<i>see</i> 159-163) ...			
177	KAMALARAI (<i>cf.</i> 180-1)	<i>Fraser</i> ...	North and south of Namoi River, New South Wales	
178	KAMILAROI (<i>cf.</i> 180-1)	<i>Howitt</i> ...	Southern tributaries of Darling River, N. S. Wales	
179	KAMILAROI (<i>cf.</i> 180 1)	<i>Ridley</i> ...	Namoi, Barwon, Bundarra, and Balonne Rivers, Liverpool Plains and Upper Hunter River, N.S. Wales	
180	KAMILAROI (<i>cf.</i> 177-9)	<i>Curr</i> ...	Tributaries of Dar- ling River, New South Wales	
181	KAMILAROI (<i>cf.</i> 177-9)	<i>Curr</i> ...	Namoi and Gwydir Rivers, N.S. Wales	
182	KAMINK ...	<i>Smyth</i> ...	North-west Victoria	
183	KANOLOO ...	<i>Curr</i> ...	Head of Comet River, Queensland	
184	KAPUN-KAPUNBARA ...	<i>Smyth</i> ...	Wimmera River, Victoria	
185	KARABARA ..	<i>Curr</i> ...	Halifax Bay, Q'land	
186	KARANGURU (<i>cf.</i> 168?)	<i>Howitt</i> ...	East of 575	
187	KARANYA ...	<i>Roth</i> ...	Boulia District, Queensland	
188	KARAWA ...	<i>Spencer and Gillen</i>	Gulf of Carpentaria (N. Territory)	
189	KARAWALLA ...	<i>Curr</i> ...	Lower Diamantina River, Queensland	
190	KARDAGUR ...	<i>Curr</i> ...	Blackwood District, West Australia	
191	KARRANBUL...	<i>Curr</i> ...	Lower Dawson River, Queensland	

REF. No.	TRIBAL NAMES.	AUTHORITY.	LOCALITY.
192	KARRANDEE (= KARUNTI?)	<i>Curr</i>	... Mouth of Norman River, Queensland
193	KARRIARRA	... <i>Curr</i>	.. North of De Grey River, North-west Australia
194	KARUNBURA	... <i>Howitt</i>	... South of 522
195	KAURNA	... <i>Howitt</i>	... North of Adelaide, South Australia
196	KRIDNAMUTHA (cf. 490)	<i>Curr</i>	... East of 226
197	KRILAMBEITCH	... <i>Smyth</i>	... East of Lake Terang, West Victoria
198	KERINMA	... <i>Howitt</i>	... Between Euston and junction Murray and Darling, Victoria
199	KINIYEN	... <i>Howitt</i>	... Hevey Bay (Isis River) Queensland
200	KIRRE-WUURONG	... <i>Darson</i>	... Mount Shadwell, Victoria
201	KNENKOREN-WURRO	... <i>Smyth</i>	.. Goulburn River, Victoria
202	KNINDOWURRONG	... <i>Smyth</i>	... Pyrenees, West Victoria
203	KŪGAI	... <i>Smyth</i>	... West of Balonne River, Victoria
204	KOJONUP	... <i>Curr</i>	... 90 miles north-west of King George Sound, W. Austr.
205	KOKAR	... <i>Curr</i>	... Mount Stirling, West Australia
206	KOKO-LAMA-LAMA ("KLA" Roth abbreviation)	... <i>Roth</i>	... Princess Charlotte Bay, and hinterland (Queensland)
207	KOKO-MINNI ("KMI." Roth abbreviation)	... <i>Roth</i>	... Middle Palmer River Queensland
208	KOKO RARUL ("KRA." Roth abbreviation)	... <i>Roth</i>	... Princess Charlotte Bay, and hinterland, Queensland
209	KOKO WARA ("KWA." Roth abbreviation)	... <i>Roth</i>	... Princess Charlotte Bay, and hinterland, Queensland
209A	KOKO-NIGODI	... <i>Roth</i>	... Bathurst Head, Queensland

REF. No.	TRIBAL NAMES.	AUTHORITY.		LOCALITY.
210	KOKO-YELLANJI ("KYE." Roth abbreviation)	<i>Roth</i>	...	Butcher Hill and Bloomfield River, Queensland
211	KOKO-YIMIDIR ("KYI." Roth abbreviation)	<i>Roth</i>	...	Cooktown and Cape Bedford, Q'land
212	KOLOR ...	<i>Dawson</i>	...	Western Victoria
213	KOLORR ...	<i>Smyth</i>	...	West of Muston Creek, W. Victoria
214	KOMBAINGHERI ...	<i>Howitt</i>	...	Coast between Clar- ence and Macleay Rivers, N.S. Wales
215	KOMBOBURA ...	<i>Howitt</i>	...	Laguna Bay (S of Wide Bay), Q'land
216	KONGAIT ...	<i>Howitt</i>	...	North of Cadell River, North-west New South Wales
217	KONGULU ..	<i>Howitt</i>	...	Dawson River, west of Rockhampton, Queensland
218	KONKUTRA ...	<i>Howitt</i>	...	Coast, east of Rock- hampton, Q'land
219	KOOCATHO ...	<i>Curr</i>	...	West of No. 226
220	KOOMBOKKABURRA ...	<i>Curr</i>	...	Main Range, between Belyando and Cape Rivers, Queensland
221	KOOMBOKKABURRA ...	<i>Curr</i>	...	Bower Downs, Q'land
222	KOONARIE ...	<i>Curr</i>	...	North of No. 226
223	KOONGERRI . .	<i>Curr</i>	...	Junction Thomson and Barcoo Rivers, Queensland
224	KOONROOLENYA ...	<i>Roth</i>	...	Boulia District, Queensland
225	KOONKURRI ...	<i>Curr</i>	..	Cloncurry River, Queensland
226	KOONYANNIE ...	<i>Curr</i>	..	North-east of Beltana, South Australia
227	KOPARBURRI ...	<i>Curr</i>	...	Barcoo River, Q'land
228	KOROCHIE ...	<i>Smyth</i>	...	East of Moyne River, West Victoria
229	KOROTCH ...	<i>Smyth</i>	...	East of Moyne River, West Victoria
230	KOWRAREGA ...	<i>Curr</i> (quoted)...	...	Prince of Wales Group, Cape York, Q'land

REF. No.	TRIBAL NAMES.		AUTHORITY.	LOCALITY.
231	KRAUATUNGALUNG (<i>clan of KURNAI</i>)	...	<i>Howitt</i>	Gippsland, Victoria
232	KROMELAK	...	<i>Smyth</i>	Wimmera District, Victoria
233	KROWITHUN-KOOLO	...	<i>Smyth</i>	East of Snowy River, Victoria
234	KUINMURBURA	...	<i>Howitt</i>	Shoalwater Bay-Port Bowen, Queensland
235	KUINMURBURA	...	<i>Howitt</i>	Broad Sound, Q'land
236	KUKATHA	...	<i>Taplin</i>	Port Lincoln-Fowler Bay, S. Australia
237	KUKEBURA	...	<i>Howitt</i>	Head of Port Bowen, Queensland
238	KULBAINBURA	...	<i>Howitt</i>	Gympie, Queensland
239	KULKADOON (<i>see 175</i>)	...	<i>Curr</i>	Cloncurry River, Queensland
240	KULKYNE	...	<i>Smyth</i>	Lower Murray River, Victoria
241	KUMBUKABURA	...	<i>Howitt</i>	North-east of Bowen Downs Station, Queensland
242	KUNDARA ("KUN." Roth abbreviation)	...	<i>Roth</i>	Coast, Staaten- Nassau Rivers, Queensland
243	KUNGALBURA	...	<i>Curr</i>	Between Port Mackay and Broad Sound, Queensland
244	KUNGARDITCHA	...	...	Junction Thomson and Buccoo Rivers, Queensland
245	KUNGGANJI ("KUG." Roth abbreviation)	...	<i>Roth</i>	Cape Grafton, Queensland
246	KURIG-GAI	...	<i>Fraser</i>	East of Dividing Range, Hunter River to Picton, New South Wales
247	KURM-ME-LAK	...	<i>Smyth</i>	Lake Hindmarsh, Victoria
248	KURNAI	...	<i>Howitt</i>	Gippsland, Victoria
249	KURNAI	...	<i>Howitt and Fison</i>	Gippsland, Victoria
250	KURNANDABURI	...	<i>Howitt</i>	Mt. Howitt, North of Thargomindah, Q.
251	KURUNG	...	<i>Howitt</i>	Werribee River, Nth. of Geelong, Vict.

RIT. No.	TRIBAL NAMES.		AUTHORITY.		LOCALITY.
252	KUTUBURA ...	..	<i>Howitt</i>	...	Broad Sound, Q'land.
253	KUURN KOPAN-NOOT ...	...	<i>Dawson</i>	...	Western Victoria
254	KUYANI ...	..	<i>Howitt</i>	...	South of Lake Eyre, South Australia
255	KWOKWA ...	...	<i>Roth</i>	...	Boulia Dist., Q'land.
256	LACI-LACI (cf. 258-9 and 266, 268-9, 272).		<i>Fraser</i>	...	Euston - Balranald, Riverina, N.S. Wales
257	LAILBUIL ...	...	<i>Smyth</i>	...	Wimmera District, Victoria
258	LAITCHE-LAITCHE (cf. 256 and 266, 268-9 and 272)		<i>Curr</i>	...	Kulkyne, Victoria
259	LAITCHELAITCHE (cf. 256 and 266, 268-9 and 272)		<i>Curr</i>	...	Bumbang, Murray River
260	LARRAKENYAH ...	...	<i>Taplin</i>	...	Northern Territory,
261	LARRAKIA ...	...	<i>Curr</i>	...	Adelaide River - Port Patterson, N.T.
262	LARRIKENYA ...	...	<i>Mathew</i>	...	Port Darwin, N. Ter.
263	LARRIQUA ...	...	<i>Curr</i>	...	Port Darwin, N. Ter.
264	LEARKABULLUK ...	...	<i>Smyth</i>	...	...
	(see JAJOWERONG)				
265	LEHMOORAH ..		<i>Smyth</i>	...	Mt. Leura District, West Victoria
266	LEITCHI-LEITCHI (cf. 256, 258-9, 268-9, and 272)		<i>Howitt</i>	...	Victoria (south of Euston)
267	LIMBA-KARADJEE ...	...	<i>Curr</i>	...	Port Essington, Nth. Australia
268	LITCHOO-LITCHOO (cf. 256, 258-9, 266, 272)...		<i>Smyth</i>	...	Tymlynder. Victoria
269	LITCHY-LITCHY (cf. 256, 258-9, 266, 272). ...		<i>Smyth</i>	...	Between Echuca and junction Darling and Murray
270	LURITJA ...	...	<i>Spencer and Gillen</i>	...	Lake Amadeus (and south) Cent Austr.
271	LURITCHA ...	...	<i>Spencer and Gillen</i>	...	Central Australia
272	LUTCHYM-LUTCHYE (cf. 256, 258-9, 266, 268-9)		<i>Smyth</i>	...	Victoria
273	MAITAKUDI ("MIT." Roth abbreviation) ...		<i>Roth</i>	...	Cloncurry, Gulf Car- pentaria, Q'land
274	MAJANNA ...	...	<i>Curr</i>	...	Sharks' Bay, West Australia

REF. No.	TRIBAL NAMES.	AUTHORITY.		LOCALITY.	
275	MALLANPARA ("MAL." Roth abbreviation)	<i>Roth</i>	...	Lower Tully River, Queensland	
276	MANDAMBARA	...	<i>Curr</i>	...	Halifax Bay, Q'land
277	MANULEY	...	<i>Curr</i>	...	Mount Remarkable District, Flinders Ra., S. Australia
278	MARA	...	<i>Spencer and Gillen</i>	...	Gulf Carpentaria, N. Territory
279	MARDALA	...	<i>Howitt</i>	...	East of Lake Torrens, N.S. Wales
280	MAROURA (cf. 282)	...	<i>Taplin</i>	...	Lower Darling River, N.S. Wales
281	MAROURA	...	<i>Taplin</i>	...	Junction Darling and Murray Rivers, N.S. Wales
282	MAROWERA (cf. 280-1)	<i>Curr</i>	...	Junction Darling and Murray Rivers, N.S. Wales	
283	MARULA	...	<i>Howitt</i>	...	East of 638
284	MAUDALGO	...	<i>Curr</i>	...	Lower Dawson River, Queensland
285	MEEBIN	...	<i>Mathew</i>	...	Point Danger, New South Wales
286	MEEROONI	...	<i>Curr</i>	...	Bustard and Rodds Bays and hinter- land, Queensland
288	MIAPPI	...	<i>Curr</i>	...	Leichardt - Selwyn District, Q'land.
289	MIKOOLAN (cf. 341 and 342)	<i>Curr</i>	...	Cloncurry River, Queensland	
290	MIKOOLUN (cf. 341 and 342)	<i>Roth</i>	...	Cloncurry District, Queensland	
291	MILPULKO	...	<i>Howitt</i>	...	West of Darling, north of Menindie, N.S. Wales
292	MILYA-UPPA	...	<i>Curr</i>	...	Torrowotto Lake
293	MINGUN	...	<i>Curr</i>	...	Gulf of Carpentaria
294	MINING	...	<i>Howitt</i>	...	Port Eucla, Austra- lian Bight, W. A.
295	MINNAL-YUNGAR	...	<i>Curr</i>	...	Victoria Plains, W.A.
296	MINUNG (cf. 294 ?)	...	<i>Curr</i>	...	King George Sound, West Australia
297	MEENING	...	<i>Curr</i>	...	DeGrey River - King. Geo. Sound, W.A.

REF. No.	TRIBAL NAMES.		AUTHORITY.		LOCALITY.
298	MINYUNG ...	...	<i>Fraser</i>	...	Clarence River, New South Wales
299	MIORLI ...	...	<i>Roth</i>	...	Boulia District, Q'ld.
300	MIRKIN ...	...	<i>Curr</i>	...	Palmer River, Q'land
301	MIUBBI ...	...	<i>Roth</i>	...	Cloncurry District, Queensland
302	MOGULLUMBITCH	...	<i>Howitt</i>	...	South Ovens River, Victoria
303	MOTTERIBAN	...	<i>Curr</i>	...	Goulburn - Murray area, Victoria
304	MOKABURRA	...	<i>Curr</i>	...	Ravensbourne Creek, Queensland
305	MONGULLABURRA	...	<i>Curr</i>	...	Fort Cooper, Q'land
306	MONULGUNDEROH	..	<i>Smyth</i>	...	Daylesford, Victoria
307	MOOCHERRAK	...	<i>Smyth</i>	...	South-West of Pyrenes, W. Victoria
308	MOOLOOLA ...	...	<i>Curr</i>	...	Between Brisbane and Gympie, Q'land
309	MOONIJAN ...	...	<i>Curr</i>	...	Stradbroke and Moreton Island, Q'land
310	MOONORA-NGATPAN	...	<i>Smyth</i>	...	Macalister & Thomson Rivers, Vict.
311	MOORLOOBULLOO	...	<i>Curr</i>	...	Georgina Riv., junction King's Creek, Queensland
312	MOORUNDEE	...	<i>Taplin</i>	...	Murray River, South Australia
313	MOPOR ...	...	<i>Dawson</i>	...	West Victoria
314	MOPORII ...	...	<i>Smyth</i>	...	West of Hopkins River, Victoria
315	MORRUBURRA	...	<i>Curr</i>	...	Lynd River, Q'land
316	MOURALUNG-BULA	...	<i>Howitt</i>	...	Goulburn Riv., Vict.
317	MUINBURA ...	...	<i>Howitt</i>	...	Head of Broad Sound, Queensland
318	MUKJARAWAINT	...	<i>Howitt</i>	...	South of Wimmera River, Victoria
319	MULIARRA ...	...	<i>Curr</i>	...	Upp. Sandford River, West Australia
320	MULKALI ...	...	<i>Curr</i>	...	Lower Dawson River, Queensland
321	MULLUNGKILL	...	<i>Smyth</i>	...	South of Lake Burumbete, W. Vict.
322	MULYA-NAPA	...	<i>Curr</i>	...	North-east corner of New South Wales
323	MUMKELUNK	...	<i>Smyth</i>	...	Between Moyne and Shaw Rivers, West Victoria

REF. No.	TRIBAL NAMES.	AUTHORITY.	LOCALITY.
324	MUNDAINBURA	... <i>Howitt</i>	... North of Denham Range, Queensland
325	MUNGABERA	... <i>Spencer and Gillen</i>	... Central Australia
326	MUNGABIRRA	... <i>Curr</i>	... Cape River District, Queensland
327	MUNGERA ...	... <i>Curr</i>	... Cape River District, Queensland
328	MUNGUBRA ...	... <i>Curr</i>	... Cape River District, Queensland
329	MUNGULBARA	... <i>Curr</i>	... Halifax Bay, Q'land
330	MUNKIBURA	... <i>Curr</i>	... South of No. 50
331	MUNYABURA	... <i>Howitt</i>	... Tinana Creek, West of Wide Bay, Q'ld.
332	MURABURA ...	... <i>Howitt</i>	... South Fraser Island, Queensland
333	MURRAWORRY	... <i>Mathew</i>	... Between Warrego and Culgoa Rivers
334	MURRINJAKI	... <i>Fraser</i>	... East coast N.S. Wales, from Bulli to Gabo Island
335	MURRUMNINGAMA	... <i>Curr</i>	... Condamine River, Queensland
336	MURUNUDA ...	... <i>Mathew</i>	... South Gregory District, Queensland
337	MUTABURA (<i>cf.</i> 339)	... <i>Howitt</i>	... Bowen Downs Station, Queensland
338	MUTHINUTHI	... <i>Howitt</i>	... Lachlan, near junction with Murray
339	MUTHOBURRA (<i>cf.</i> 337)	... <i>Curr</i>	... Elgin Downs, Q'land
340	MUTHERABURA	... <i>Howitt</i>	... East of No. 115
341	MYKOOLON (<i>cf.</i> 289-90 and 342)	... <i>Curr</i>	... Leichardt - Selwyn District, Q'land
342	MYKOOLAN (<i>cf.</i> 289-90 and 342)	... <i>Curr</i>	... Between Gregory and Leichardt Rivers, Queensland
343			
344	NARBOOMUERE	... <i>Curr</i>	... Logan River, Q'land
345	NARRAGOET	... <i>Smyth</i>	... East of Curdie Ck., West Victoria
346	NARRANGGA...	... <i>Howitt</i>	... North York Peninsula, S. Australia
347	NARRINYERI (<i>see</i> 349)...	... <i>Curr</i>	... Murray River - Lacapède Bay, S. Austr.
348	NARRINYERI (<i>see</i> 349)...	... <i>Taplin</i>	... Murray River, South Australia

REL. No.	TRIBAL NAMES.	AUTHORITY.		LOCALITY.
349	NARRINYERI (<i>cf.</i> 347-8)	<i>Howitt</i>	...	Encounter Bay and the Coorong, South Australia
350	NATINGERO ...	<i>Curr</i>	...	200 miles north-east of Newcastle, West Australia
351	NATRAKBOOLAK (<i>cf.</i> 54)	<i>Curr</i>	...	Tabilk, Goulburn River, Victoria
352	NEITCHEYONG ...	<i>Smyth</i>	...	East of Mt. William, West Victoria
353	NERIBULLOK ...	<i>Curr</i> (quoted)...	...	Upper Goulburn River, Victoria
354	NETRAKBULLOK (<i>cf.</i> 51)	<i>Curr</i> (quoted)...	...	Upper Goulburn River, Victoria
355	NGAIKUNGO ("NGL." Roth abbreviation)	<i>Roth</i>	...	Atherton, Q'land
356	NGAMENI ...	<i>Howitt</i>	...	Warburton River, Central Australia
357	NGAREGO (= 130) ...	<i>Howitt and Fison</i>	...	Monaro District, New South Wales
358	NGAREGO (= 130) ...	<i>Fraser</i>	...	Monaro District, New South Wales
359	NGARIGO (= 130) ...	<i>Howitt</i>	...	Monaro District, New South Wales
360	NGARRIMOWRO ...	<i>Curr</i>	...	Goulburn - Murray Rivers, Victoria
361	NGARUN-WILLAM ...	<i>Howitt</i>	...	South of Dandenong, Victoria
362	NGATCHAN ("NGA." Roth abbreviation)	<i>Roth</i>	...	Atherton, Q'land
363	NGOKGURRING ...	<i>Curr</i>	...	Doubtful to Israelite Bays, W. Austr.
364	NGOORAIALUM ...	<i>Curr</i>	...	Seymour to Murchison, Victoria
365	NGOORAIALUM ...	<i>Curr</i>	...	Goulburn River, Vict.
366	NGURAWOLA ...	<i>Howitt</i>	...	East of Warburton Ranges, C. Australia
367	NGURLA ...	<i>Curr</i>	...	Mouth of DeGrey, River, North-west Australia
368	NIMALDA ...	<i>Taplin</i>	...	Mt. Freeling, South Australia
369	NINGEBUL ..	<i>Howitt</i>	...	Islands off Port Bowen, Q'land
370	NIRABA-BALUK ...	<i>Howitt</i>	...	South Campaspe River, Victoria

REF. No.	TRIBAL NAMES.		AUTHORITY.		LOCALITY.
371	NOONUKUL ...	...	<i>Curr</i>	...	North Stradbroke Island, Queensland
372	NOUUN ...	...	<i>Roth</i>	...	Upper Flinders River, Queensland
373	NUKUNUKUBURA	...	<i>Howitt</i>	...	North of Gayndah, Queensland
374	NUTHER-GALLA	...	<i>Curr</i>	...	Melbourne, Victoria
374A	NGGERIKUDI (NGG.)	...	<i>Roth</i>	...	Batavia River, West Cape York, Q'land
375	OBORINDI ...	...	<i>Curr</i>	...	"Kalkadoon" Dis- trict, Queensland
376	OBOROONDI ...	...	<i>Roth</i>	...	Leichardt - Selwyn District, Q'land
377	OLONGBURA ...	...	<i>Howitt</i>	...	North Fraser Island Queensland
378	ONDERLEBURRI	...	<i>Curr</i>	...	Barcoo River, Q'land
379	OLOOPOOLOO	...	<i>Roth</i>	..	Boulia District, Q'ld
380	OONAMURRA = 585	...	<i>Curr</i>	...	Flinders and Clon- curry Rivers, Q'ld.
381	OORALLIM ...	..	<i>Curr</i> (quoted)	...	Goulburn River, Vict.
382	ORAMBUL ...	...	<i>Howitt</i>	...	West of Curtis Island (mainland), Q'land
383	ORIBA-KULBA	...	<i>Curr</i>	...	Mount Black, Q'land.
384	OWANBURRA = KOWANBURRA		<i>Curr</i>	...	Upper Belyando River, Queensland
385	OWANGUTTHA	...	<i>Smyth</i>	...	Goulburn - Murray area, Victoria
386					
387	PADTHAWAY	...	<i>Taplin</i>	...	Salt Creek, S. Austr.
388	PAIKAL-YUG...	...	<i>Fraser</i>	...	Richmond - Clarence Rivers, N.S. Wales
389	PALLANGANMIDDAH	...	<i>Smyth</i>	...	N.E. Victoria
390	PALLANGANMIDDAH	...	<i>Smyth</i>	...	Kiewa River, Vict.
391	PANGARANG ...	...	<i>Curr</i> (quoted)	...	.....
392	PANGGARANG	...	<i>Smyth</i>	...	Moirs, Victoria
393	PANGORANG	...	<i>Smyth</i>	...	Angle of Goulburn- Murray, Victoria
394	PANGURANG...	...	<i>Smyth</i>	...	Lower Goulburn (and Murray) Rivers, Victoria
395	PARINGNOBA	...	<i>Howitt</i>	...	Tin-Can Bay, Wide Bay, Queensland

REF. No.	TRIBAL NAMES.		AUTHORITY.	LOCALITY.
396	PARNKALLA ...	...	<i>Howitt</i>	... West Spencer Gulf, South Australia
397	PARNKALLA ...	...	<i>Taplin</i>	... Port Lincoln, South Australia
398	PAROOINGE ...	...	<i>Curr</i>	... Paroo River, New South Wales
399	PARUINJI ...	...	<i>Howitt</i>	... West Paroo River, New South Wales
400	PRECHERA ...	...	<i>Curr</i>	... Mungalelella Creek, Warrego River, Queensland
401	PEEDONA ...	...	<i>Curr</i>	... East DeGrey River, North-west Austr.
402	PEEDONG ...	..	<i>Curr</i>	... Upper Murchison, W. Australia
403	PEEK-WHUURONG	...	<i>Dawson</i>	... Port Fairy, Victoria
404	PEKPIN-BURRI	...	<i>Curr</i>	... Barcoo River, Q'land
405	PEGULLOBURRA	...	<i>Curr</i>	... Natal Downs, Cape River, Q'land
406	PEOPLEMAN (<i>sic</i>)	...	<i>Curr</i>	... Lower Blackwood, West Australia
407	PERENBHA ...	...	<i>Curr</i>	... Burdekin River, Q'ld
408	PERTORE = 532	...	<i>Smyth</i>	... Lake Terang District, West Victoria
409	PIKKOLATPAN	...	<i>Curr</i>	... Goulburn - Murray, Victoria
410	PIKUMBUL ..	...	<i>Curr</i>	... Weir and MacIntyre Rivers, N.S. Wales
411	PIKUMBUL ..	...	<i>Mathew</i>	... Dumaresque River, New South Wales
412	PIKUMBUL ...	...	<i>Ridley</i>	... Calandoon, Q'land (and same as 410)
413	PILAUHINGOONDEETCH (see 159-63)	...	...	Western Victoria
414	PINJARRA ...	...	<i>Curr</i>	... Western Australia
415	PINOBA ...	...	<i>Howitt</i>	... North of mouth of Mary River, Q'land
416	PIET-KOPAN-NOOT	...	<i>Dawson</i>	... Western Victoria
417	PITTA-PITTA = 49 ("PPT." Roth abbreviation)	...	<i>Roth</i>	.. Boulia, Queensland
418	PUKANBURA	...	<i>Howitt</i>	... Broad Sound, Q'land
419	PUNNOINJON	...	<i>Smyth</i>	... East of Serra Range, West Victoria
420	PURTEET-CHOWEL	...	<i>Smyth</i>	... Mt. Hamilton Dis- trict, W. Victoria

REF. No.	TRIBAL NAMES.		AUTHORITY.		LOCALITY.
421	QUEMARIBURRA	...	<i>Curr</i>	...	Lynd River, Q'land
422	QUEMBINBIRRA	...	<i>Curr</i>	...	Cape River District, Queensland
423	RINGA-RINGA	...	<i>Curr</i>	...	Hamilton River, Queensland
424	RINGA-RINGAROO	...	<i>Curr</i>	...	Between Georgina and Burke Rivers, Queensland
425	RINGO-RINGO	...	<i>Roth</i>	...	Boulia District, Queensland
426	RISTEBURA ...	...	<i>Howitt</i>	...	Shoalwater Bay, Queensland
427	RUKKIA ...	...	<i>Roth</i>	...	Boulia District, Queensland
428	RUNDUBURA	..	<i>Howitt</i>	...	Townshend Island, Queensland
429	RUNGA-RUNGAWAH	...	<i>Curr</i>	...	Roxburgh Downs, Queensland
430	RUNGO-RUNGO	...	<i>Roth</i>	...	Boulia District, Q'ld
431	TAA-TATTY (cf. 442)	...	<i>Smyth</i>	...	Victoria
432	TANGAMBALLANGA	...	<i>Smyth</i>	...	North-east Victoria
433	TANGARA ...	...	<i>Howitt</i>	...	East of Dry Salt Lakes, Cent. Austr.
434	TAOUNGURONG (cf. 470 ?)		<i>Smyth</i>	...	Campaspe and Goul- burn Rivers, Vict.
435	TARAWARRACKEL	...	<i>Smyth</i>	...	Lake Wellington, Victoria
436	TARAWARRACKA	...	<i>Smyth</i>	...	Port Albert, Victoria
437	TARRIBELUNG	...	<i>Howitt</i>	...	Bundaberg, Q'land
438	TARABURA ...	...	<i>Howitt</i>	...	Head of Shoalwater Bay, Queensland
439	TARUMBUL ...	...	<i>Howitt</i>	...	Head of Dee River, Keppel Bay, Q'land
440	TARRUMBURA	...	<i>Howitt</i>	...	North east of Peak Downs, Q'land
441	TATALI ...	...	<i>Fraser</i>	...	Euston - Balranald, Riverina, N. S. Wales
442	TATATHI (cf. 431)	...	<i>Howitt</i>	...	East of junction Mur- ray and Darling Rivers
443	TATEBURRA ...	...	<i>Curr</i>	...	Tower Hill and Cor- nish Creeks Q'land

REF. No.	TRIBAL NAMES.	AUTHORITY.	LOCALITY.
444	TATUNGALONG (<i>Clan of KURNAI</i>) ...	<i>Howitt</i> ...	Gippsland, Victoria
445	TAWARBURA ..	<i>Howitt</i> ...	Mary River, Q'land
446	TERRABURRA ...	<i>Curr</i> ...	Alice River, Q'land
447	TERRABURA ...	<i>Howitt</i> ...	North-east of Balcaldine, Queensland
448	TERREMBEHAL ...	<i>Smyth</i> ...	Hopkins River-Fiery Creek, W. Victoria
449	TERRIN-CHALLUM ...	<i>Smyth</i> ...	East of Salt Creek, Western Victoria
450	THARAMIRTONG ...	<i>Smyth</i> ...	Kiewa River, Victoria
451	THIBURA ...	<i>Howitt</i> ...	South of Gayndah, Queensland
452	THUNKUMBURA ...	<i>Howitt</i> ...	West of Maryboro', Queensland
453	THURIBURA ...	<i>Howitt</i> ...	Polson, Hervey Bay, Queensland
454	TIDNI ...	<i>Howitt</i> ...	Central Australian Bight (coast)
455	TILBABURA ...	<i>Howitt</i> ...	North of Tambo, Queensland
456	TINGATINGANA ...	<i>Smyth</i> ...	Strzelecki Creek, Cooper Creek District, S. Australia
457	TINGULJULLER ..	<i>Curr</i> ...	Burdekin River, Queensland
458	TINKA-TINKA ...	<i>Roth</i> ...	Boulia, Queensland
459	TIRTALOWA-KANI ...	<i>Smyth</i> ...	Between Tambo and Snowy Rivers, Vict.
460	TIRTHUNG ...	<i>Smyth</i> ...	Nicholson River, Vict.
461	TITNIE ...	<i>Taplin</i> ...	Fowlers Bay, South Australia
462	TJINGILLI ...	<i>Spencer and Gillen</i> ...	Powell Creek, Central Australia
463	TONGARANKA ...	<i>Howitt</i> ...	South of Barrier River, N.S. Wales
464	TOOLENYAGAN ...	<i>Curr</i> ...	Goulburn - Murray Rivers, Victoria
465	TOOLGINBURRA ...	<i>Curr</i> ...	West of No. 243
466	TOOLKEMBURRA ...	<i>Curr</i> ...	Burdekin River, Queensland
467	TOOLOOA (= 104) ...	<i>Curr</i> ...	Boyne River, Q'land
468	TORRABURRI ...	<i>Curr</i> ...	Barcoo River, Q'land
469	TOORAM ...	<i>Smyth</i> ...	West of Curdies Ck., West Victoria

RFF. No.	TRIBAL NAMES.	AUTHORITY.		LOCALITY.	
470	TOURAHONONG (<i>cf.</i> 434)	<i>Smyth</i>	...	Portland, Victoria	
471	TOWNIMBURRLARGOON- DEETCH	...	<i>Smyth</i>	...	See Jajowerong
472	TOWROONBAN	...	<i>Curr</i>	...	Goulburn - Murray Rivers, Victoria
473	TUMBULLA ...	...	<i>Curr</i>	...	Cape River District, Queensland
474	TUNBERRI ...	...	<i>Curr</i>	...	Lower Diamantina River, Queensland
475	TURA = 127	...	<i>Curr</i>	...	Mt. Serle, Flinders Ra., S. Australia
476	TURRA ...	...	<i>Howitt and Fison</i>	...	Yorke Peninsula, South Australia
477	TURRUBUL (<i>Dialect</i>)	...	<i>Ridley</i>	...	Brisbane River, Queensland
478	TURRBAL ...	...	<i>Howitt</i>	...	Moreton Bay, Q'land
479	TURUWUL (<i>Dialect</i>)	...	<i>Ridley</i>	...	Port Jackson, New South Wales
480					
481	ULAOLINYI ("ULA." Roth abbreviation)	<i>Roth</i>	...	Boulia District, Queensland	
482	UMBAIA ...	...	<i>Spencer and Gillen</i>	...	East of Powell Creek, Central Australia
483	UMBERTANA	...	<i>Curr</i>	...	DeGrey River Dis- trict, N.W. Austr.
484	UNALLA ...	...	<i>Curr</i>	...	Raffles Bay, Northern Territory
485	UNDEKEREBINA ("UND." Roth abbreviation)	<i>Roth</i>	...	Upp. Georgina River, Queensland	
486	UNDUAMO ...	...	<i>J. A. Thorpe</i>	...	Somerset, Cape York, Queensland
487	UNGHI ...	...	<i>Howitt</i>	...	Charleville, Q'land
488	UNGORRI ...	...	<i>Howitt</i>	...	Condamine River, east of junction with Maranoa, Queensland
489	UNMATJERA ...	...	<i>Spencer and Gillen</i>	...	Hann Range, Central Australia
490	UNYAMOOTHA = 196	...	<i>Gason</i>	...	Beltana, S. Australia
491	URABUNA ...	...	<i>Howitt</i>	...	Neale River, Central Australia
492	URABUNNA ..	...	<i>Spencer and Gillen</i>	...	South of Oodnadatta, South Australia
493	„ ...	...	<i>Spencer and Gillen</i>	...	Central Australia

REF. No.	TRIBAL NAMES.	AUTHORITY.		LOCALITY.
494	WAAGAI ...	...	<i>Spencer and Gillen</i>	Central Australia
495	WAARINGULUM = 171	<i>Curr</i>	...	Goulburn - Murray Rivers, Victoria
496	WACIGARI ...	...	<i>Fraser</i>	...
				East of Dividing Range, between Clarence and Mac- leay Rivers, New South Wales
497	WAGA ...	...	<i>Curr</i>	...
				Dawson River, Queensland
498	WAGGITE ...	...	<i>Curr</i>	...
				West of Palmerston, N. Territory
499	WAGGUMBURA	...	<i>Howitt</i>	...
				S.S.E. of Gayndah, Queensland
500	WAIKY-WAIKY	...	<i>Smyth</i>	..
				Between Echuca and junction Darling- Murray Rivers, N.S. Wales
501	WAILWUN ...	...	<i>Curr</i>	...
				Barwon River, New South Wales
502	WAIMBIO ...	...	<i>Howitt and Fison</i>	Junction Darling- Murray and Rufus River, N.S. Wales
503	WAKELBURA	...	<i>Howitt</i>	...
				Peak Downs-Aramac, Queensland
504	„ ...	...	<i>Howitt</i>	...
				Mt. Narién, west of Clermont, Q'land
505	WALARAI (KAMALARAI)	...	<i>Fraser</i>	...
				Tributaries Darling, Nth. Central New South Wales
506	WALLAROO ...	...	<i>Taplin</i>	...
				Yorke Peninsula, South Australia
507	WALKONDA ..	...	<i>Curr</i>	...
				Mth. of Roper River, E. North. Territ.
508	WALMUNDI ...	...	<i>Curr</i>	...
				Burdekin River, Queensland
509	WALOOKA ...	...	<i>Curr</i>	...
				Upper Roper River, E. North. Territ.
510	WALOOKERA ("WAL." Roth abbreviation)	...	<i>Roth</i>	...
				Upper Georgina River, Queensland
511	WALPARI ...	...	<i>Spencer and Gillen</i>	West of Tennant Creek, C. Australia
512	„ ...	...	<i>Spencer and Gillen</i>	Central Australia
513	WAL-WALLIE	...	<i>Miller and Meston</i>	Georgina River, Queensland

REF. No.	TRIBAL NAMES.		AUTHORITY.	LOCALITY.
514	WAMBA-WAMBA	...	<i>Howitt</i>	... North Campaspe River, Queensland
515	,, (= cf. 611)	...	<i>Smyth</i>	... Same region as 500
516	WAMBIA	...	<i>Spencer and Gillen</i>	... Central Australia
517	WANDANDIAN	...	<i>Ridley</i>	... Shoalhaven coast, New South Wales
518	WANDUBURA	...	<i>Howitt</i>	... Shoalwater Bay, Queensland
519	WANINGOTBUN	...	<i>Smyth</i>	... Angle Goulburn and Murray Rivers, Victoria
520	WANMUNG-WANMUNGKUR	...	<i>Smyth</i>	... Lake Hindmarsh, Victoria
521	WANNON	...	<i>Smyth</i>	... Sandford and Hamilton, Victoria
522	WARABUL	...	<i>Howitt</i>	... Yaamba, Queensland
523	WARABURA	...	<i>Howitt</i>	... South of Stanwell, Victoria
521A	WAPA-BARA	...	<i>Roth</i>	... Great Keppel Island, Queensland
524	WARANBURA	...	<i>Howitt</i>	... Peninsula North of Port Bowen, Q'land
525	WARBAA	...	<i>Howitt</i>	... West of Bundaberg, Queensland
526	WARING-ILLAN	...	<i>Howitt</i>	... South Goulburn River, Victoria
527	WAROOKO	...	<i>Curr</i>	... Raffles Bay District, N. Territory
528	WARRAMUNGA	...	<i>Spencer and Gillen</i>	... Central Australia
529	,,	...	<i>Spencer and Gillen</i>	... Tennant Creek, Central Australia
530	WARRANGOO	...	<i>Curr</i>	... Kent District, West Australia
531	WARRIALGONA	...	<i>Curr</i>	... Lynd River, Q'land
532	WARRNAMBOOL = 408	...	<i>Smyth</i>	... Lake Terang District, West Victoria
533	WATCHANDI	...	<i>Curr</i>	... Mouth Murchison River, W. Australia
534	WATHI-WATHI	...	<i>Howitt</i>	... Murray River, East of Lake Tyrrell, Victoria
535	WATTY-WATTY (cf. 594)	...	<i>Smyth</i>	... Tyntyndyer, Victoria
536	,,	...	<i>Smyth</i>	... Same region as 500
537	WAUKABOONIA	...	<i>Curr</i>	... "Kalkadoon" District, Queensland

Ref. No.	TRIBAL NAMES.	AUTHORITY.		LOCALITY.
538	WAWURRONG (= YARRA)	<i>Smyth</i>	...	Port Phillip to Mt. Macedon, Victoria
539	WAWOORONG (= YARRA)	<i>Smyth</i>	...	Southern Victoria
540	WAYRRONGGOONDEETCH (<i>cf.</i> 160, &c.)			
541	WERDOOKARRY	...	<i>Curr</i>	Shaw River, trib. De Grey Riv., N.W.A.
542	WERLKO	...	<i>Roth</i>	Boulia District, Queensland
543	WERREITCH-WERREITCH	<i>Smyth</i>	...	East of Eumeralla, West Victoria
544	WKKI-WKKI	...	<i>Howitt</i>	Murray River, south-east of Euston, Vic.
545	WELUINBURA	...	<i>Howitt</i>	Hinterland of Shoalwater Bay, Q'land
546	WERRUPURRONG	...	<i>Smyth</i>	East of Fiery Creek, West Victoria
547	WHAJOOK	...	<i>Curr</i>	York District, West Australia
548	WHITWURNDIUK	...	<i>Smyth</i>	East of 165
549	WILINGURA	...	<i>Spencer and Gillen</i>	Daly Waters, Central Australia
550	WILLARA	...	<i>Howitt</i>	North of Stuart Range, C. Australia
551	WILLEUROO	...	<i>Taplin</i>	Gawler Ranges, S. Australia
552	WILYA	...	<i>Howitt</i>	East of Grey Range, North-west New South Wales
553	WIPIK	...	<i>Curr</i>	South of 496
554	WIRA DJARI	...	<i>Fraser</i>	Large area of Central N.S. Wales
555	WIRA-DJURI	...	<i>Howitt</i>	South Central New South Wales
556	WIRAIARAI	...	<i>Curr</i>	Barwon River, N.S. Wales
557	WIRANGU	...	<i>Howitt</i>	West of Lake Torrens, C. Australia
558	WITHAJU	...	<i>Howitt</i>	East of Lachlan, near junction with Murray R., N.S.W.
559	WITOURO	...	<i>Smyth</i>	Geelong, Victoria
560	WITOWURRONG	...	<i>Smyth</i>	Geelong and north, Victoria
561	WOGEE	...	<i>Curr</i>	Moreton Islands, Queensland

REF. No.	TRIBAL NAMES.		AUTHORITY.		LOCALITY.
562	WOKKELUURRA	...	<i>Curr</i>	...	Lower Belyando and Sutton Rivers, Queensland
563	WOLEROI (<i>cf.</i> 127a)	...	<i>Curr</i>	...	Moonee and Weir Rivers
564	WOLGAL	...	<i>Howitt</i>	...	North of Australian Alps, South New South Wales
565	WOLLAROI (= EUAHLAYI) <i>cf.</i> 127a	...	<i>Parker</i>	...	.....
566	WOLLAROI (<i>cf.</i> 127a)	...	<i>Howitt</i>	...	North Darling River, east of Bourke, New South Wales
567	WOLLITHIGA	...	<i>Curr</i>	...	Goulburn - Murray area, Victoria
568	WOLLONGURMEE	..	<i>Curr</i>	...	Middle Norman River, Queensland
569	WOLLUM = (WOLLOOM OR WOOLLOOM)	...	<i>Smyth</i>	...	Lake Wellington, Gippsland, Vict.
570	WONGATPAN	...	<i>Curr</i>	...	Same as 567
571	WONGHIBON	...	<i>Howitt</i>	...	Central N.S. Wales
572	WONGHURRAGHEERAR- GOONDETCH	...	...	...	See Jajowerong
573	WONGKAOOROO	...	<i>Gason</i>	...	Neighbours of "Dieyerie," South Australia
574	"	...	<i>Curr</i>	...	Neighbours of "Dieyerie," South Australia
575	WONKAJERA ("WON." Roth abbreviation)		<i>Roth</i>	...	Boulia District, Queensland
576	WONKAWALA	...	<i>Howitt</i>	...	E. Charlotte Waters, Central Australia
577	WONKANGURU	...	<i>Howitt</i>	...	Barcoo or Cooper Creek, north of Lake Eyre, C. Aust.
578	WONKATYERI (<i>cf.</i> 575)		<i>Howitt</i>	...	North Macumba River, Queensland
579	WONNARUA	...	<i>Curr</i>	...	Hunter River, New South Wales
580	WONUNDA MEENING	...	<i>Curr</i>	...	Eyre Sand Patch, West Australia
581	WOONEWOORONG	...	<i>Smyth</i>	...	Yarra and Western- port, Victoria

REF. No.	TRIBAL NAMES.		AUTHORITY.		LOCALITY.
582	WOOLLATHARA	...	<i>Smyth</i>	...	Moama, Murray River, Victoria
583	WOOLLOOM-BA-BELLOOM-BELLOOM	...	<i>Smyth</i>	...	Rosedale and Lake Reeves, Victoria
584	WOOLNA	...	<i>Curr</i>	...	Adelaide River and Coburg Peninsula, N Territory
585	WOONAMURRA ("Woo." Roth abbreviation)		<i>Roth</i>	...	Upper Flinders River, Queensland
586	WOOLOOANI...	...	<i>Curr</i>	...	Middle Roper River, E. North. Territ.
587	WOOLWONGA	...	<i>Curr</i>	...	South of No. 262, &c
588	WORADJERG	...	<i>Smyth</i>	...	Between Howlong and Dora Dora, Victoria.
589	WORGAI	...	<i>Spencer and Gillen</i>		East of Tennant Ck., Central Australia
590	WORKIA	...	<i>Miller and Meston</i>		Upper Georgina River, Queensland
591	WORKOBOONGO	...	<i>Roth</i>	...	Leichardt - Selwyn District, Q'land
592	WORREEKE-BA-KOONANGYANG	...	<i>Smyth</i>	...	Mitchell, Nicholson, and Tambo Rivers, Victoria
593	WOTJOBALUK	..	<i>Howitt</i>	...	North of Wimmera River, Victoria
594	WOTTI-WOTTI (cf. 534-6)		<i>Curr</i>	...	Swan Hill, Victoria
595	WUDTHAURUNG	...	<i>Howitt</i>	...	West of Geelong, Victoria
596	WULMALA	...	<i>Spencer and Gillen</i>		West of Barrow Ck., Central Australia
597	WUMBAIO	...	<i>Howitt</i>	...	Junction Murray and Darling Rivers, Victoria
598	WIIRATHIERI (cf. 554-5)		<i>Curr</i>	...	Macquarie, Upper Castlereagh, and Bogan Rivers, N. S. Wales
599	WURUNGJERI	...	<i>Howitt</i>	...	North of Melbourne, Victoria
600	WYCHINGA	...	<i>Curr</i>	...	Macumba River, Queensland

REF. No.	TRIBAL NAMES.		AUTHORITY.	LOCALITY.
601	WYINGURRI	...	<i>Spencer and Gillen</i>	Central Australia
602	WYINURRI	...	<i>Spencer and Gillen</i>	Central Australia
603	YAAKO YAAKO	...	<i>Smyth</i>	... Lake Victoria and Rufus River, New South Wales-Vict.
604	" "	...	<i>Smyth</i>	... North-west Victoria
605	YAIRY-YAIRY	...	<i>Smyth</i>	... Same as No. 500
606	YAITMATHANG	...	<i>Hewitt</i>	... Australian Alps (Victorian side)
607	YAKKAJARI	...	<i>Fraser</i>	... Inverell - Warwick, N.S. Wales-Q'land
608	YAKUNBURA	...	<i>Hewitt</i>	... Western tributaries, Dawson River, Queensland
609	YALDIKOWERA	...	<i>Curr</i>	... North of 490
610	YALIBURA ...	...	<i>Howitt</i>	... Hervey Bay (Burrum River), Q'land
611	YAMBA-YAMBA (= 514-5)	...	<i>Smyth</i>	... Same as No 500
612	YAMBEENA ..	...	<i>Curr</i>	... Peak Downs, Q'land
613	YANDA ...	...	<i>Curr</i>	... Head of Hamilton River, Q'land
614	YANDRAWONTHA	...	<i>Curr</i>	... "Dieyerie" District
615	" "	...	<i>Gason</i>	... Neighbours of 106
616	YANGARELLA	...	<i>Curr</i>	... Nicholson River to Coast Dist, Q'land
617	YANGARILLA	...	<i>Curr</i>	... Gulf of Carpentaria
618	YANGEEBERRA	...	<i>Curr</i>	... Barcoo River, 40 miles west of Blackwall, Queensland
619	YANKIBURA...	...	<i>Howitt</i>	... Aramac, Queensland
620	YANIRUWUNTER	...	<i>Smyth</i>	... East Cooper Creek, South Australia
621	YANTRAWUNTA	...	<i>Howitt</i>	... East Barcoo or Cooper Creek, S. Australia
622	YARD-IKEN ...	...	<i>J. A. Thorpe</i>	... Somerset, Cape York, Queensland
623	YARGO ...	...	<i>Howitt</i>	... Central Mary River, Queensland
624	YARI-YARI ...	...	<i>Fraser</i>	... Euston - Balranald, Riverina, N.S.W.
625	YARBURA ...	..	<i>Howitt</i>	... Boonara Creek, south of Gayndah, Q'land
626	YAROINGA ...	...	<i>Roth</i>	... Upper Georgina River, Queensland
627	YARRA (= 538-9)	...	<i>Smyth</i>	... Southern Victoria

RPL. No.	TRIBAL NAMES.		AUTHORITY.		LOCALITY.
628	YARRA (= 538-9)	...	<i>Smyth</i>	...	Yarra River, Victoria
629	YARRAWAUKA	...	<i>Curr</i>	..	"Dieyerie" District
630	YARRAWAUKA	...	<i>Gason</i>	...	Neighbours of 106
631	YARRR-YARRR	...	<i>Smyth</i>	...	North-West Victoria
632	YARRIKUNA ...	...	<i>Curr</i>	...	East of No. 490
633	YAUOROKA ...	...	<i>Howitt</i>	...	Lake Howitt, Central Australia
634	YAUUNG-ILLAM	...	<i>Howitt</i>	...	South Goulburn River, Victoria
635	YAWAI ...	...	<i>Howitt</i>	...	Burnett River, west of Bundaberg, Q'land
636	YELINA ...	...	<i>Curr</i>	...	Burke River, Q'land
637	YELLUNGA ...	...	<i>Roth</i>	...	Boulia District, Queensland
638	YELYUYENDI	...	<i>Howitt</i>	...	Eyre Creek, Q'land
639	YERRE YERRE	...	<i>Smyth</i>	...	Mildura, Victoria
640	YETTI-MARALLA	...	<i>Howitt</i>	...	East of Peak Downs, Queensland
641	YETTI-MARALLA	...	<i>Howitt</i>	...	West of Broad Sound Ranges, Q'land
642	YIARIK ...	...	<i>Curr</i>	...	Raffles Bay District, N Territory
643	YIDINJI ('YID. abbreviation)	Roth	<i>Roth</i>	...	Mulgrave River and coast; Murray Prior Mountains, Queensland
644	YIRCLA-MEERNING	...	<i>Curr</i>	...	Eucla, W. Australia
645	YIRUN-ILLAM	...	<i>Howitt</i>	...	South Broken River, Victoria
646	YITTHA ...	...	<i>Fraser</i>	...	Euston - Balranald, Riverina, N.S.W.
647	YNARREEB-YNARREEB	...	<i>Smyth</i>	...	Mt. Sturgeon to Lake Boloke, W. Victoria
648	YOEMBARA ...	...	<i>Curr</i>	...	Halifax Bay, Q'land
649	YOURWYCHALL	...	<i>Smyth</i>	...	Wannon River to Grange Burn, Vict.
650	YUALAROI = (127a)	...	...	...	.....
651	YUALLORAI = "	...	...	...	.....
652	YUGGAI ...	...	<i>Fraser</i>	...	Bundara to Bingara, New South Wales
653	YUIN ...	...	<i>Howitt</i>	...	South-east coast of New South Wales
654	YUIPERA ...	...	<i>Curr</i>	...	Port Mackay, Q'land
655	YUNDA	<i>Roth</i>	...	Boulia District, Queensland
656	YUNTAUNTAYA	...	<i>Roth</i>	...	Boulia District, Queensland

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